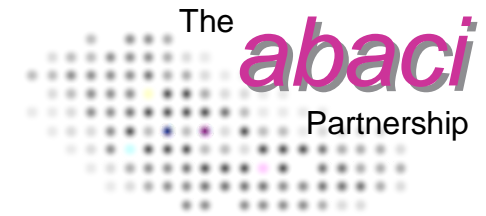


Exploiting Complexity



Climate Change Adaptation - An African Example

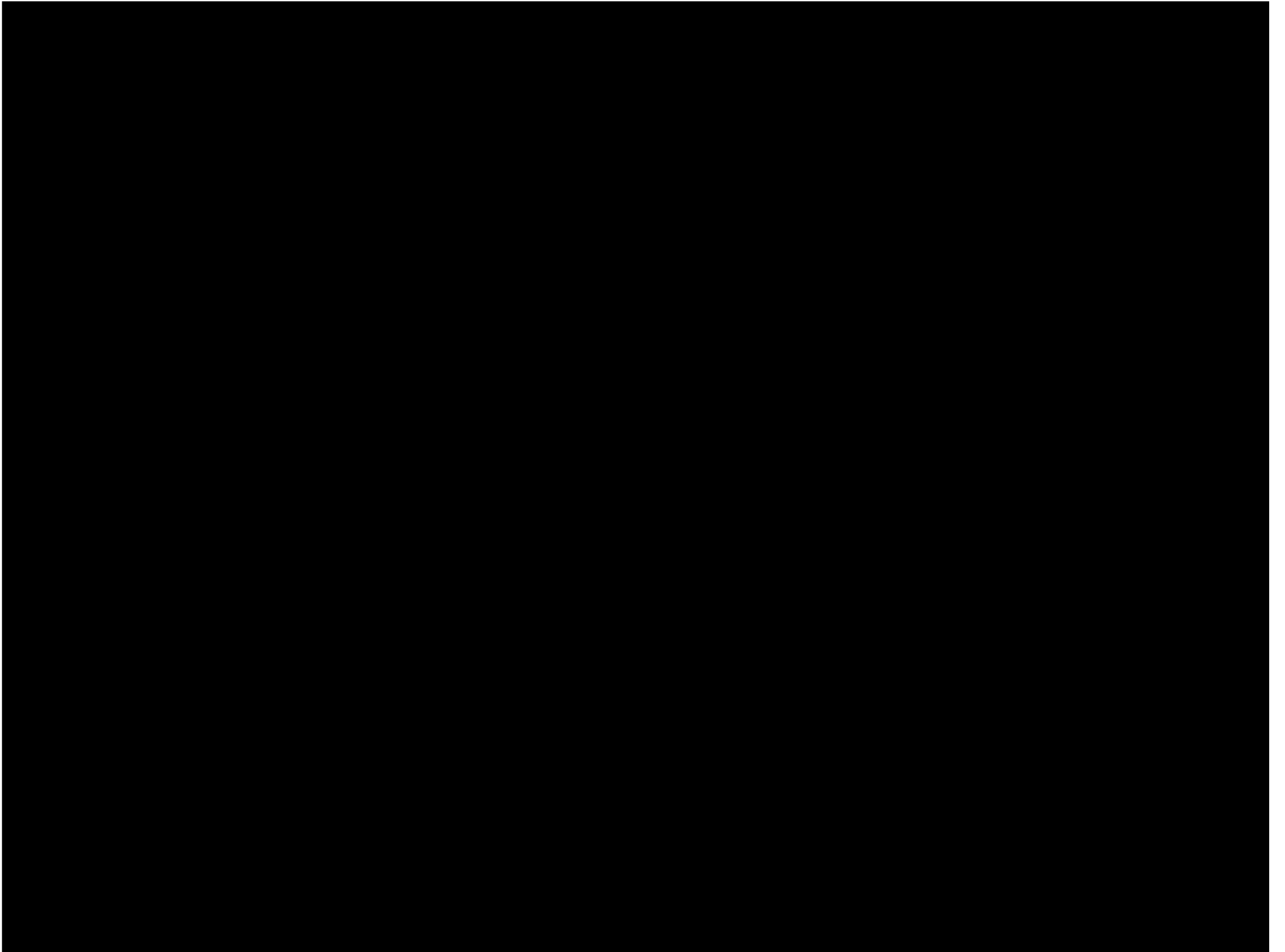
Patrick Beaument

A presentation to: CAT Members Conference

Date: 13 Oct 2013

<http://complexitydemystified.wordpress.com/>

<http://www.abaci.net/library/lib-index.htm>

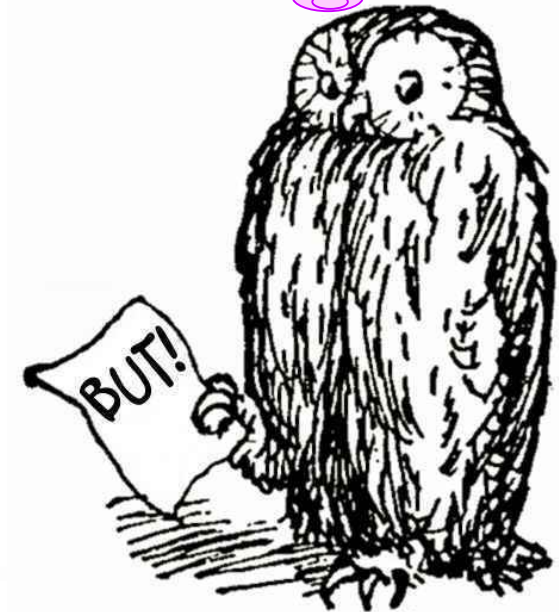


01 Climate Change Adaptation – UK-style . . .

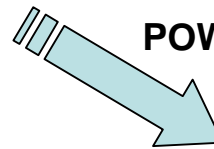
Motivated by Colin Abbiss' talk last year ...
convert to solar-powered 12 volts ...



Long-term
adaptation?



Halogen



POWERDOWN

LED





Photo: Children at Kotido Airport, Uganda. © Tom White 2012

. . . let's go to Africa . . .

02 Climate Change Adaptation – African-style . . .



. . . to Kotido – northern Uganda . . .

02 Climate Change Adaptation – African-style . . .



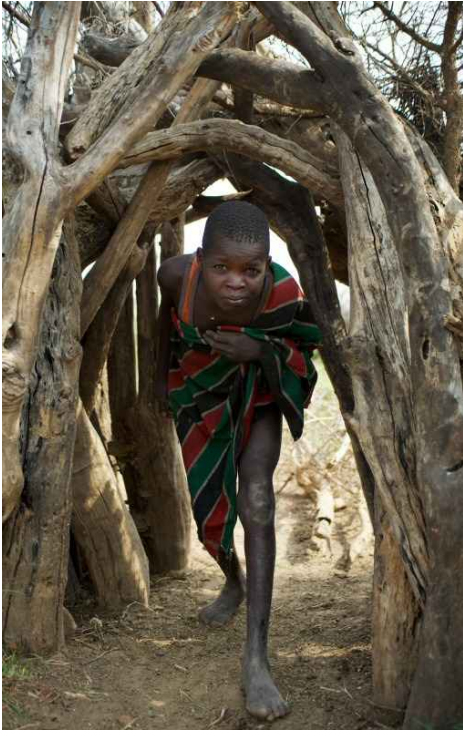
. . . and meet some of Kotido's District Officials . . .

02 Climate Change Adaptation – African-style . . .



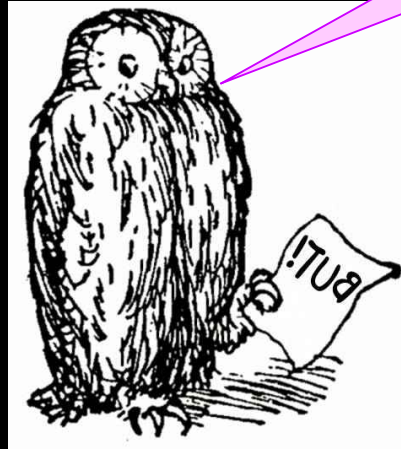
. . . experience Kotido's street scenes . . .

02 Climate Change Adaptation – African-style . . .

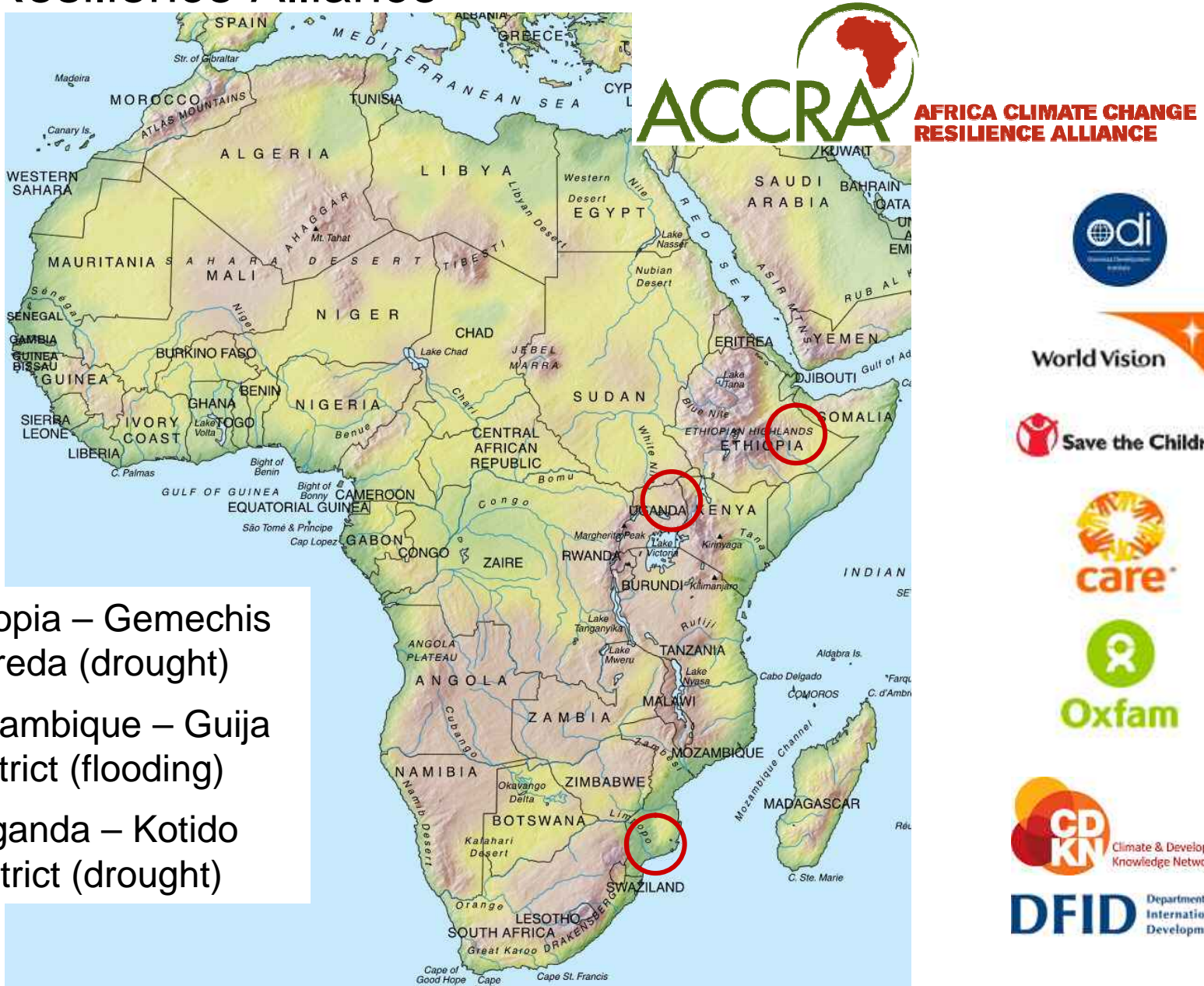


. . . visit one of Kotido's village (manyatta) . . .

and, as an
outsider, do
what?



03 ACCRA - The African Climate Change Resilience Alliance



- Ethiopia – Gemechis woreda (drought)
- Mozambique – Guija district (flooding)
- Uganda – Kotido district (drought)



03 ACCRA - The African Climate Change Resilience Alliance

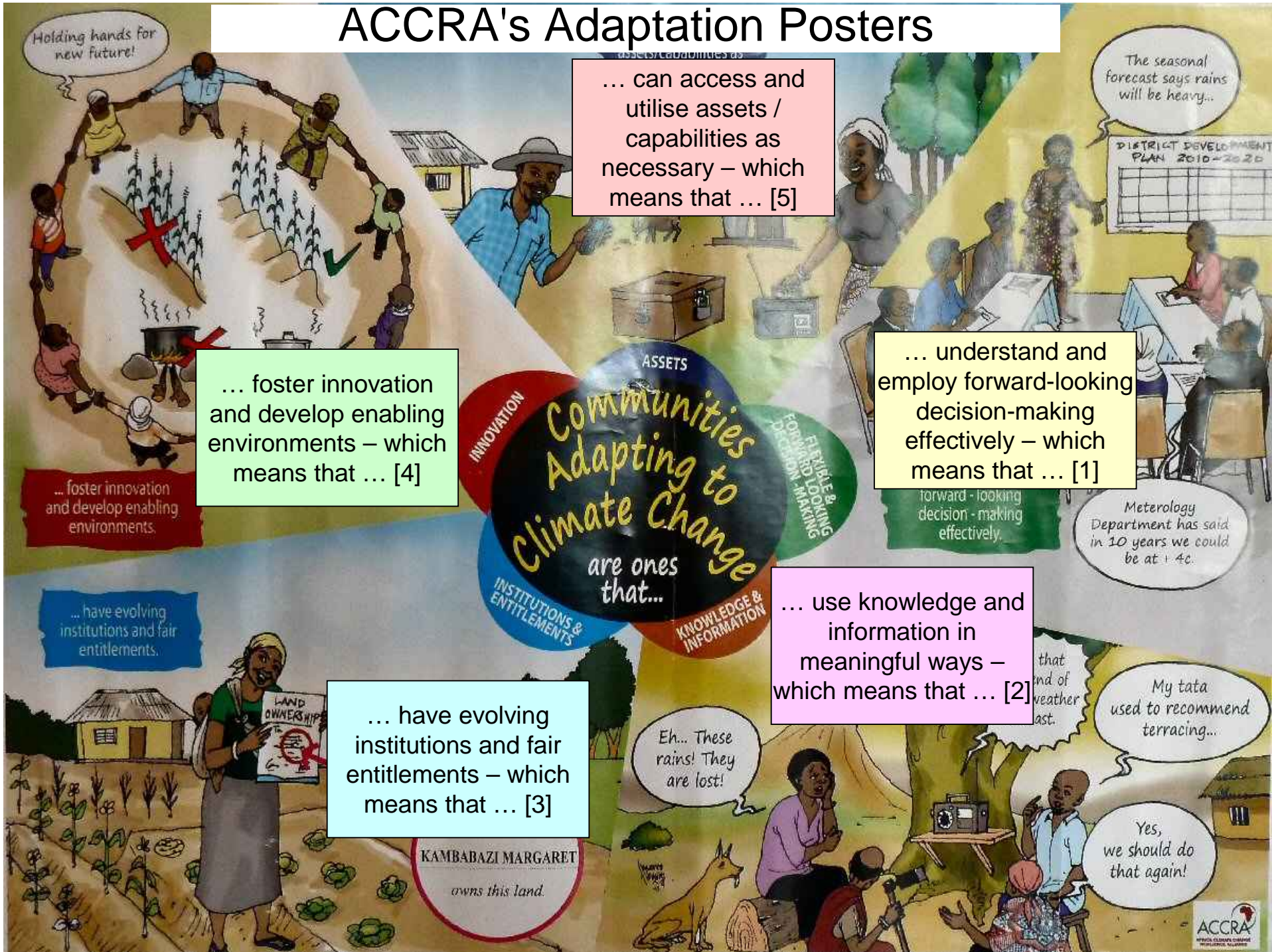


ACCRA's ...

- objectives are to:
 - increase governments' and development actors' use of evidence.
- insights are used for:
 - designing and implementing both humanitarian and development interventions.
- value is that it:
 - works 'bottom-up' at the district level to increase poor and vulnerable communities' **adaptive capacity**.

Which means
what in
practice?

ACCRA's Adaptation Posters



Holding hands for new future!

... can access and utilise assets / capabilities as necessary – which means that ... [5]

The seasonal forecast says rains will be heavy..

DISTRICT DEVELOPMENT PLAN 2010-2020

... foster innovation and develop enabling environments – which means that ... [4]

... understand and employ forward-looking decision-making effectively – which means that ... [1]

... foster innovation and develop enabling environments.



forward-looking decision-making effectively.

Meterology Department has said in 10 years we could be at + 4c.

... have evolving institutions and fair entitlements.

... use knowledge and information in meaningful ways – which means that ... [2]

... have evolving institutions and fair entitlements – which means that ... [3]

that kind of weather ast.

My tata used to recommend terracing...

Eh... These rains! They are lost!

Yes, we should do that again!

KAMBABAZI MARGARET owns this land.

03 Climate Change Adaptation: some African narratives . . .

*"I'm Mr Reactive, I just sit under the tree – bad things always **just happen** to me!"*



*"I'm Mrs Visionary, I know that we must **anticipate change!**"*



*"I'm Mr Deliberative, I say we should **study the past** to learn what to do!"*

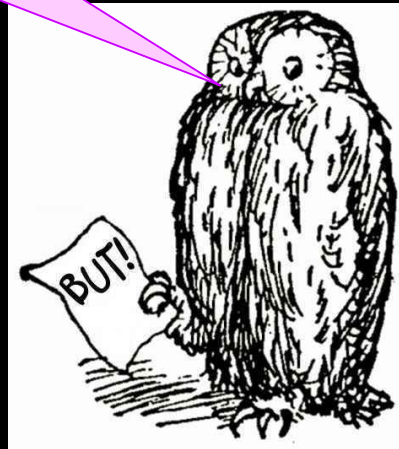


Eh... These rains! They are lost!



Narratives on the Notes Page below

. . . so what are
the insights for
ZCB and the UK?



04 Climate Change Adaptation: What to do differently?

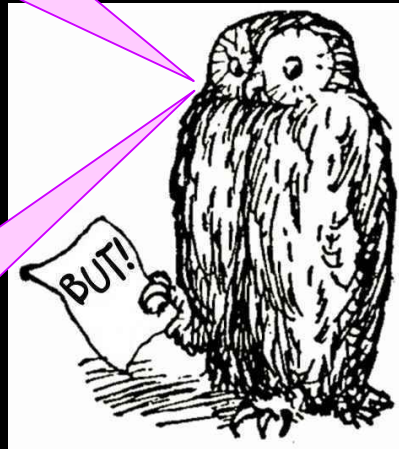
		[Backward-looking – predictable]		[Far-sighted – given the unpredictable]	
		Adaptation: <i>Reactive</i>	Adaptation: <i>Deliberative</i>	Adaptation: <i>Visionary</i>	Capabilities for <i>Visionary Adaptation</i>
Adaptive Capacity Characteristics	Decisions and Governance	- Absent - [Have to deal with the now]	Deducing policy / plans based on hindsight - minimise 'risk'	Trade-off possible futures and consequences - given uncertainty	Have open mindset able to work with change / uncertainty
	Innovation - exploration	Minimal / habits, but necessity the 'mother of invention'	Converging on 'best practice' – test wiggle-room	Explore / experiment. Discover / exploit degrees-of-freedom / opportunities	Use 'Imagineering' e.g. forecasting, backcasting, horizon scanning
	Knowledge / Information	Use of traditional wisdom / lore - as seems fit	Generating 'facts' from historical data / 'lessons identified'	Formulate / iterate possibilities and establish 'measures' of change	Able to work with plausible narratives and relevant indicators / warnings
	Institutions / Entitlements	'Fixed', based on precedents	Organising in line with plan delivery	Devolve / adapt for change. Support initiative / proven resilience	Set up flexible mix of formal and ad-hoc communities of interest
	Asset base / Availability	Indigenous - use what's on hand, current skills	Matching assets (usually centrally held) to plans	Access what's relevant / best placed given ongoing needs	Distribute for contingency - plus strategic / central for crises
	Nature of Outcomes	Driven by events, people 'passive'	Events dealt with only if planned for, otherwise 'crisis'	Events mitigated - as possible change is anticipated and adaptive capacity in place	

04 Climate Change Adaptation – What would good look like in a ZCB UK?

- Resilient communities adapting to climate change will be effective and adaptive when they:
 - accept that they ***need to be ready for future events*** brought about by climate change;
 - ***can think about the consequences of possible change*** in a far-sighted way in the face of uncertainty;
 - ***can appreciate what they need to change practically**** to be resilient and adaptive;
 - ***can intervene and influence*** to implement the decisions in collaboration with the appropriate people;
 - can understand the nature of climate-change adaptation and ***learn from 'doing things differently' over time ...***

. . . how far have we got in adapting to climate change in the UK?

. . . or is Africa ahead of us . . . ?



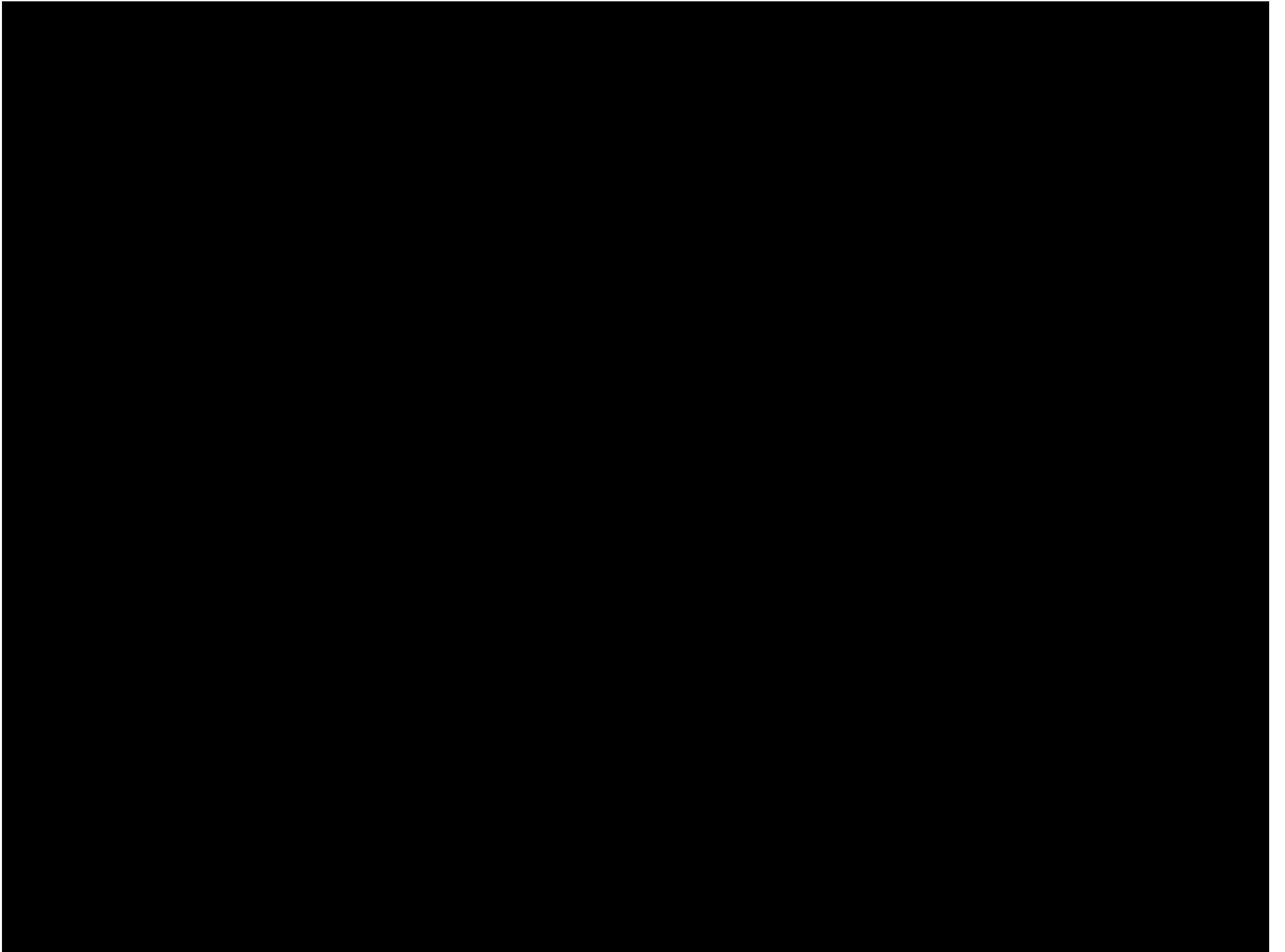
Thank you! Comments, questions?



Photo: Children at Kotido Airport, Uganda. © Tom White 2012

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- Zander Stone R. and Zander, B. (2002) The Art of Possibility, Penguin, London.



[1] Understanding and employing forward-looking decision-making means ...

[1.1] - Recognising and prioritising short- and long-term benefits, by ...

- planning beyond 5 years, considering possible futures as well as projections of current situations
- having and using flexible national priorities and resource allocation

[1.2] - Looking for possibilities and opportunities (finding space to act), by ...

- being guided by risk, capacity and vulnerability analysis
- accepting future uncertainties at local level
- looking for opportunities in national priorities
- being skilled at judging what is now appropriate
- requiring appropriate changes in the donor policies

[1.5] - Working in collaborative ways, and integrating cross-sector by ...

- sharing risk and vulnerability analyses from national to local levels as needed
- using integrated analysis, planning and implementation beyond single sectors
- promoting holistic approaches to activities, interactions and relationships
- integrating flexible local, regional and district planning

Planning is flexible and incorporates adaptive long-term climate, social and economic issues across sectors and levels including stakeholders

[1.4] - Planning by reflecting and adapting continuously over time, by

- incorporating broader factors than at present which challenge assumptions and 'received wisdom'
- being prepared to / actually adapting plans as circumstances change

[1.3] - Appreciating informal interactions (social), maximising intangible (community) benefits, such as ...

- identifying those which should be included in national development plan priorities
- ensuring participation of women and other special groups

[2] Using knowledge and information in a meaningful way means ...

[2.1] - Recognising appreciating and incorporating the value of local knowledge, by ...

- exploring indigenous knowledge and insights to identify those that still work
- emphasising the importance of timely information provision

[2.5] – Expressing, visualising and communicating information in an accessible manner, by ...

- ensuring that usable and accessible media are used
- simplifying the information provided to users
- acting on the need to provide different types of information to different users: youth, women, PLWD (People Living with Disabilities)
- better academic expertise at working with local communities
- using local examples

People get timely information in useable formats to support forward-looking decision-making via established communication and feedback channels

[2.4] - Teaching children and adults the utility of information, and how to interpret it by ...

- building community capacity to interpret and translate information
- giving women's views a voice
- building ability to use technology effectively

[2.2] - Integrating cross-sector information, by ...

- collaborating actively across the communications and feedback channels
- willingly sharing lessons and experiences across sectors
- creating 'platforms' for sharing lessons and experiences (forums)
- networking openly
- sharing responsibility and accountability through planning
- monitoring and evaluating in adaptive ways (different indicators)

[2.3] - Appreciating what is available and where it is – and trusting it, by ...

- highlighting key resources that provide timely information
- establishing channels for communication and feedback by using suitable shared platforms
- exploiting technology appropriately

[3] Having evolving institutions and fair entitlements means ...

[3.1] - Collaborating across agencies and communities, by ...

- involving stakeholders in decision-making processes at all levels (regardless of tribe, age, race or gender)
- improving coordination, integration and sharing of information across disciplines (scientific and indigenous)
- providing working facilities

[3.5] - Recognising rights and responsibilities, by ...

- involving all stakeholders including beneficiaries and duty-bearers, (including women and children) - sense of ownership
- providing (self) enforcement of policies, laws and responsibilities
- respecting rights to information, land titles etc
- sensitizing rights holders / duty bearers to their responsibilities

An enabling environment exists in which equitable access, control and decision-making (involving vulnerable groups) occur

[3.4] - Providing advice, protection and support, such as ...

- providing protection and support to those carrying out enforcement
- provide assets and resources needed (eg, transport)

[3.2] - Being trustworthy and respecting contracts / agreements, by ...

- sharing relevant information and adhering to terms and conditions in agreements openly
- formulating relevant policies about to unsure enforcement
- acknowledging and acting on the need for trust and showing respect in practice
- setting binding timeframes for agreements
- ratifying agreements

[3.3] - Promoting equitable access to and control of resources at all levels by ...

- engaging in fair negotiation and arbitration (by neutral arbitrators accepted by both parties)
- empowering vulnerable groups such as women and children
- exposing those who act in selfish interests
- encouraging community participation

[4] Fostering innovation and developing enabling environments means ...

[4.1] - Supporting new ideas with incentives, such as ...

- encouraging planners and implementers to gain insights from continuous monitoring and adapting
- those which encourage community-level contributions
- providing benefits to those addressing trans-boundary concerns
- rewarding leaders who have courage for the greater good
- opening resource centres

[4.5] - Nurturing a participatory, trans-boundary environment, by

- introducing new organisations and (regional) institutions which facilitate dialogue
- supporting and promoting existing institutions that aid communication and feedback
- respecting community-level contributions
- involving duty-bearers and practitioners
- recognising migration of animals across borders

Innovations are adaptive and anticipatory and enable people to have ownership, grasp opportunities and deal with climate change sustainably

[4.4] - Learning from experimenting, from successes and from failures, by ...

- exploring innovations, guided by risk and vulnerability assessments based on possible futures not just current concerns
- allocating resources which allow experiential learning and feedback (eg, copying and developing, expose visits)

[4.2] - Being prepared to try new things, do existing things differently, such as ...

- actively looking to improve ongoing activities and actually doing them differently
- looking for and exploiting opportunities across all sectors / activities – networking in new ways
- planning from the bottom-up
- exploring indigenous innovations
- incorporate spirit of volunteerism

[4.3] - Promoting self-generated initiatives, such as ...

- diversifying livelihoods
- suggesting new ways-of-working for ongoing activities
- supporting community-driven processes and traditional methods (where appropriate)
- planning initiated from the bottom-up

[5] Accessing and utilising assets / capabilities as necessary means ...

[5.1] - Knowing what / who / when is available, where they are and their status (abilities, willing-ness, able to work / function etc), by ...

- focussing on community sustainable diversification skills and experiments
- utilising private-sector / NGO involvement
- doing adaptive resource management
- understanding needs, costs / overheads of working differently

[5.5] - Having the means to 'pay' for assets / capabilities, such as, by ...

- utilising the opportunities available via new markets and sectors
- sharing skills and capabilities
- being able to ensure the sustainability / availability of assets and capabilities
- cooperating on shared provision

Processes, people's abilities and skills development, social networks, information sharing etc comes first over physical (money-based) assets

[5.4] - Being prepared to share and re-allocate assets / capabilities, by ...

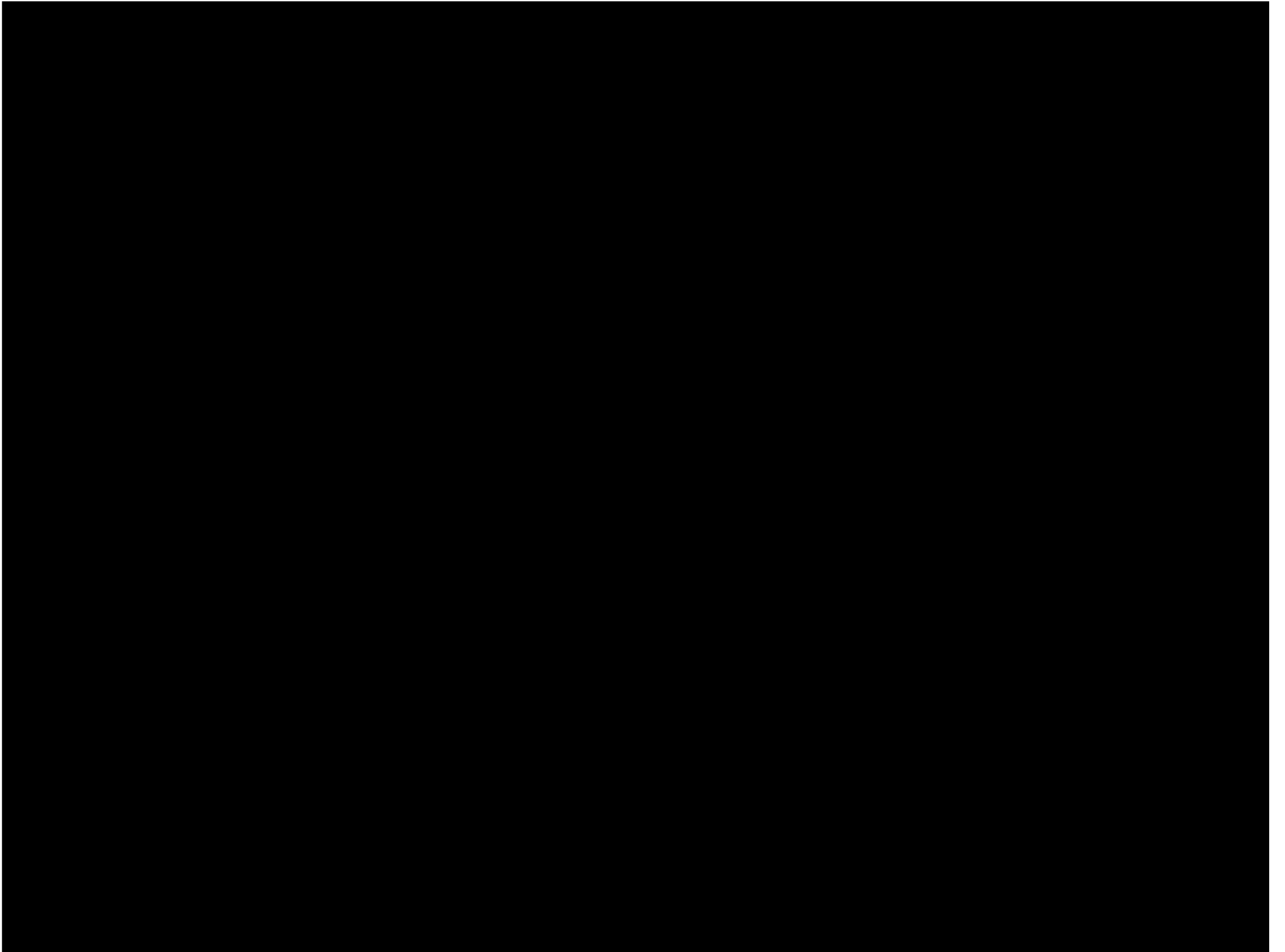
- building on information and experience-sharing
- being open about the actual availability and utility of assets
- promotion of regional cooperation

[5.2] - Involving other sectors (in decisions about competing priorities etc), by ...

- incorporating community-based skills and insights
- working up from community-level crop / livestock value addition to the national
- including private-sector contributions
- encouraging cross-planning sector coordination meetings

[5.3] - Being trained and competent in their use / deployment, by ...

- focussing on development of community-based business skills
- employing capabilities available at any level, including via market linkages
- training of decision-makers
- putting in place capacity-building to enable change

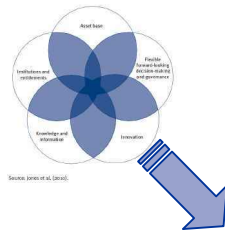


ACCRA's Complexity Safari: Landmarks

More practical

More abstract

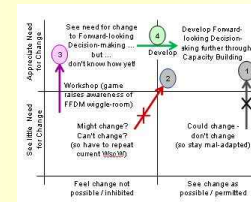
ACCRA Phase 1:
LAC Framework



ACCRA Guidance



Phase 2 Approach:



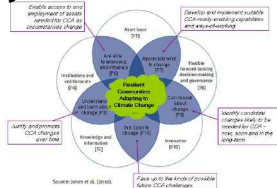
Capacity-Building Programmes

Insights from



Complexity

Synthesis: Context



FFDM transition for CCA

FFDM Awareness-raising

Climate Change Adaptation (CCA)



Transition Workshops

Strategies

FFDM Adaptation

Better decision-making

for Change

	Adaptation: Resilience	Adaptation: Decision-making	Adaptation: Forward-looking	Capabilities for Transition: Adaptation
FFDM and resilience	Adaptation: Resilience: About 10% of the world's population is affected by climate change. The IPCC has identified that the world must adapt to a warmer world.	Adaptation: Decision-making: Decision-making is a process that involves making choices between different options. It is a key component of resilience.	Adaptation: Forward-looking: Forward-looking decision-making is a process that involves making choices between different options. It is a key component of resilience.	Capabilities for Transition: Adaptation: Adaptation is the process of adjusting to the current or expected future conditions. It is a key component of resilience.
Resilience	Resilience is the ability of a system to absorb disturbance and reorganize while undergoing change so as to still retain essentially the same function. It is a key component of resilience.	Decision-making: Decision-making is a process that involves making choices between different options. It is a key component of resilience.	Forward-looking: Forward-looking decision-making is a process that involves making choices between different options. It is a key component of resilience.	Transition: Transition is the process of moving from one state to another. It is a key component of resilience.
Nature of Outcomes	Outcomes are the results of a process. They are the end products of a process. They are the results of a process.	Outcomes are the results of a process. They are the end products of a process. They are the results of a process.	Outcomes are the results of a process. They are the end products of a process. They are the results of a process.	Outcomes are the results of a process. They are the end products of a process. They are the results of a process.

What to do Differently

ACCRA Game



Experiences of FFDM

Insights for ZCB?

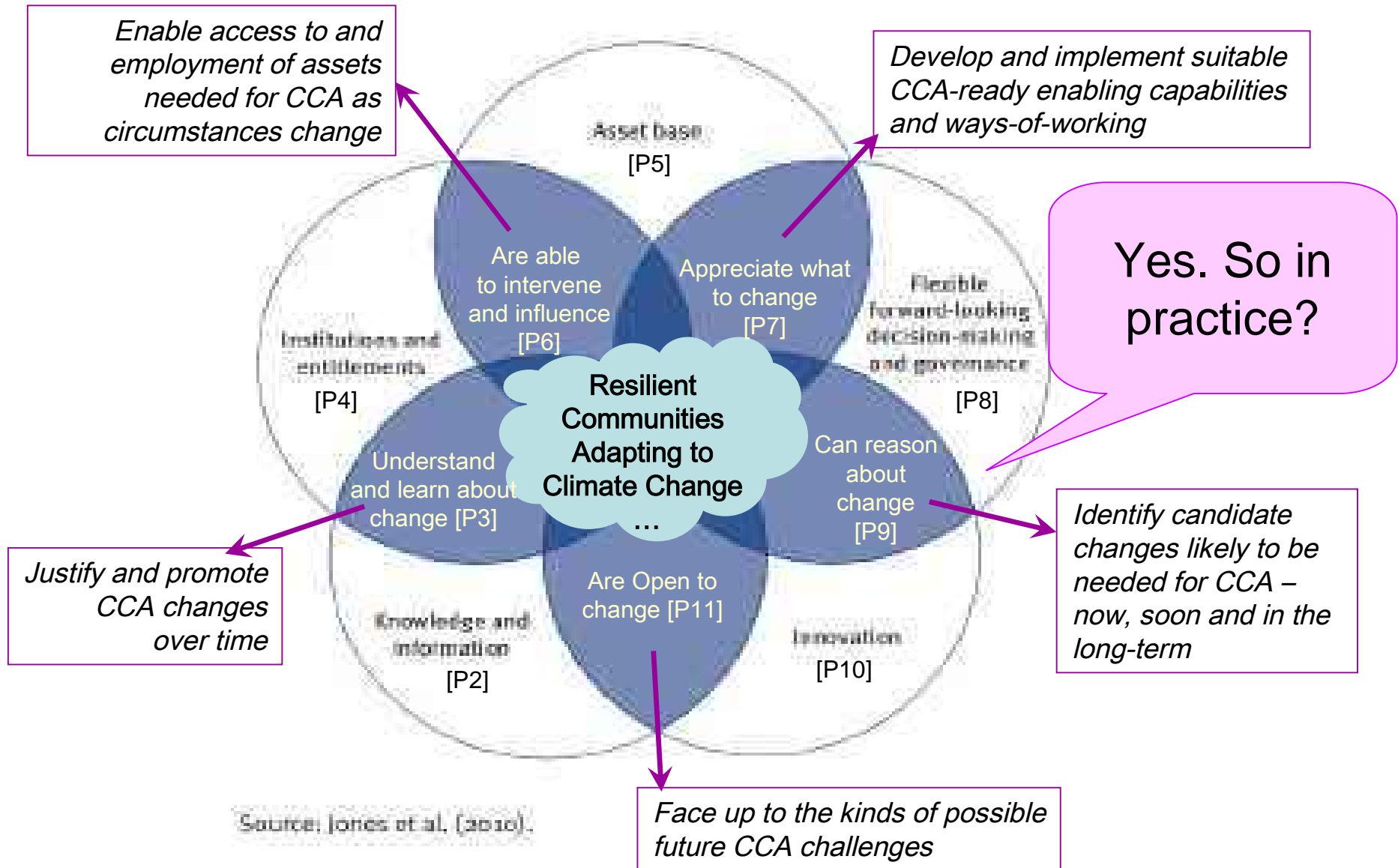
Eleven principles that underpin climate change adaptation and resilience issues

The following principles, as they are derived from complexity science insights, reflect the integrative and iterative manner in which ongoing effective CCA can be maximised:

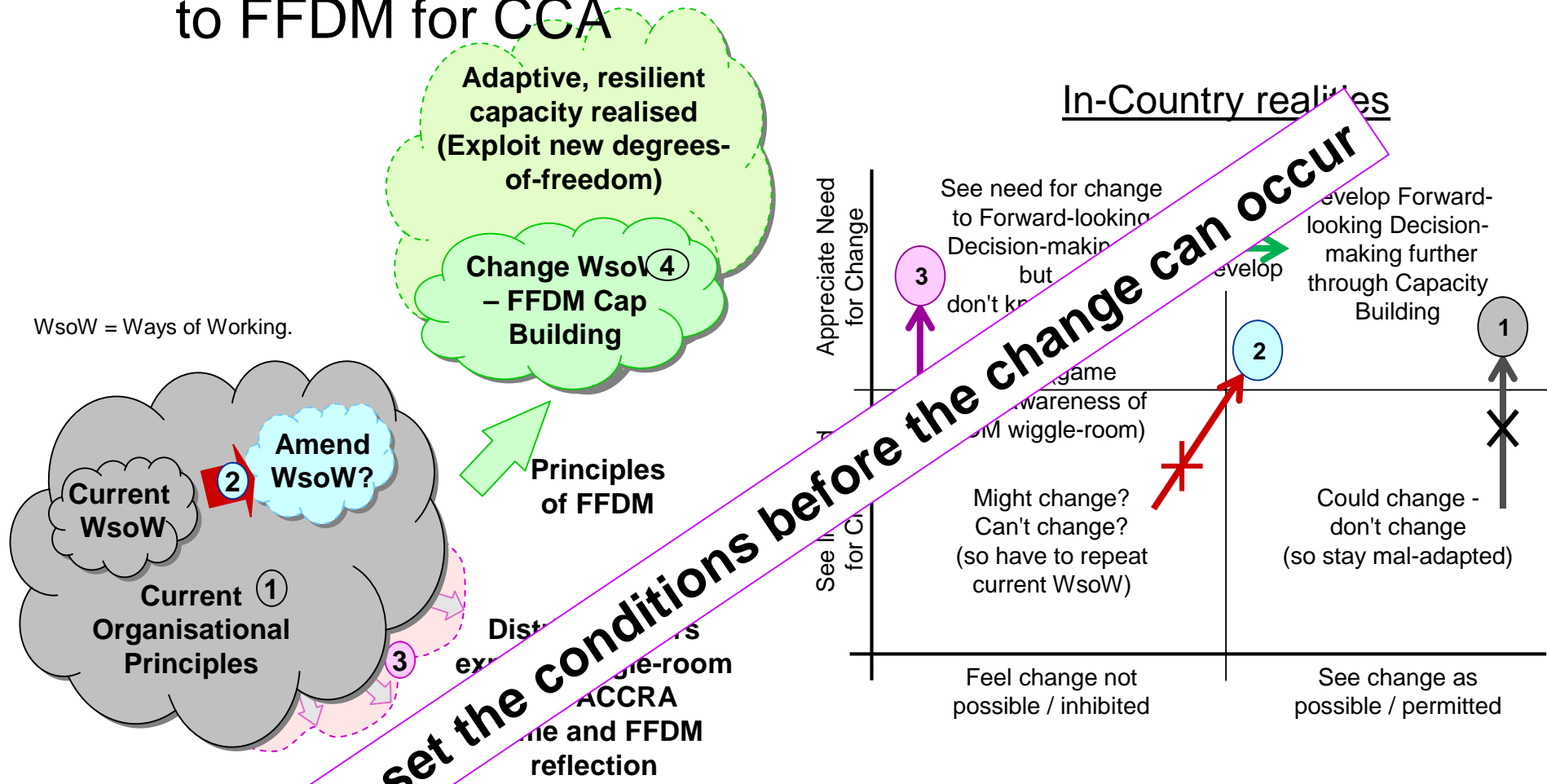
- Principle 1: Dynamic, ongoing 'complex' CCA can be influenced purposefully.
- Principle 2: Context understanding is diverse – there is no 'single view of the truth'.
- Principle 3: Change is ongoing, dynamic and multi-level – there is no 'end-state'.
- Principle 4: There are many qualities of power and influence to accommodate.
- Principle 5: It is necessary to appreciate who is/what are best placed to bring about change.
- Principle 6: CCA requires that 'interventions' have the necessary Requisite Variety, i.e. have appropriate 'Complexity-Worthiness' given the desired changes.
- Principle 7: CCA is not just about adapting, but is also about being able to adapt the adapting and learn.
- Principle 8: Different decision-making and problem-solving styles are required for different situations.
- Principle 9: When reasoning about change, past evidence does not guarantee future prediction.
- Principle 10: When innovating, transformation may be the only valid option.
- Principle 11: Change will be impeded unless appropriate degrees of freedom and 'wiggle room' are available..



03 ACCRA Synthesis: Complexity Insights, Change Strategies and the LAC



05 ACCRA Phase 2 Approach: Transitioning to FFDM for CCA



Have to set the conditions before the change can occur

- 1 **No action:** Do not attempt to change current capacity and organisational principles (stick to linear planning).
- 2 **CCA blocked:** Changes **not** made to WsoW within the current organisational principles (thought too difficult).
- 3 **FFDM awareness-raising:** Game explores wobble room - see benefits of making changes towards FFDM WsoW.
- 4 **Transition to FFDM WsoW:** Adopt and employ set of FFDM organisational principles through Capacity Building.

07 FFDM Awareness Raising: ACCRA In-country Workshops

- Held in Uganda (2012), and Ethiopia and Mozambique.
- Programme:
 - Pre-survey about CCA and FFDM
 - Background to CCA and the need for FFDM
 - Introduction to the ACCRA Game – play two rounds
 - Reflect on FFDM and different ways-of working
 - ACCRA Game – play two rounds and identify 'winners'
 - Reflect on what to do differently in practice – planning exercise using FFDM techniques
 - Capacity-building questionnaire – intentions for the future
 - Post survey about CCA and FFDM ways-of-working
- Follow-on capacity-building activity will be followed by impact assessments – report to be published 2014.

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