



**ECRAN / TAIEX**

**Environment and Climate Regional Accession Network**

# **Implementation: Developing an action planning**

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## 0. Basics on Implementation

### 1. Implementation instruments

### 2. Review / update of instruments

### 3. Seeking stakeholder agreement

## 4. Implementation roadmap / Action plan



» 1. Preparing the ground for adaptation

» 2. Assessing risks and vulnerabilities to climate change

» 3. Identifying adaptation options

» 4. Assessing adaptation options

» 5. Implementation

» Mainstreaming: Identify and make use of entry points for adaptation

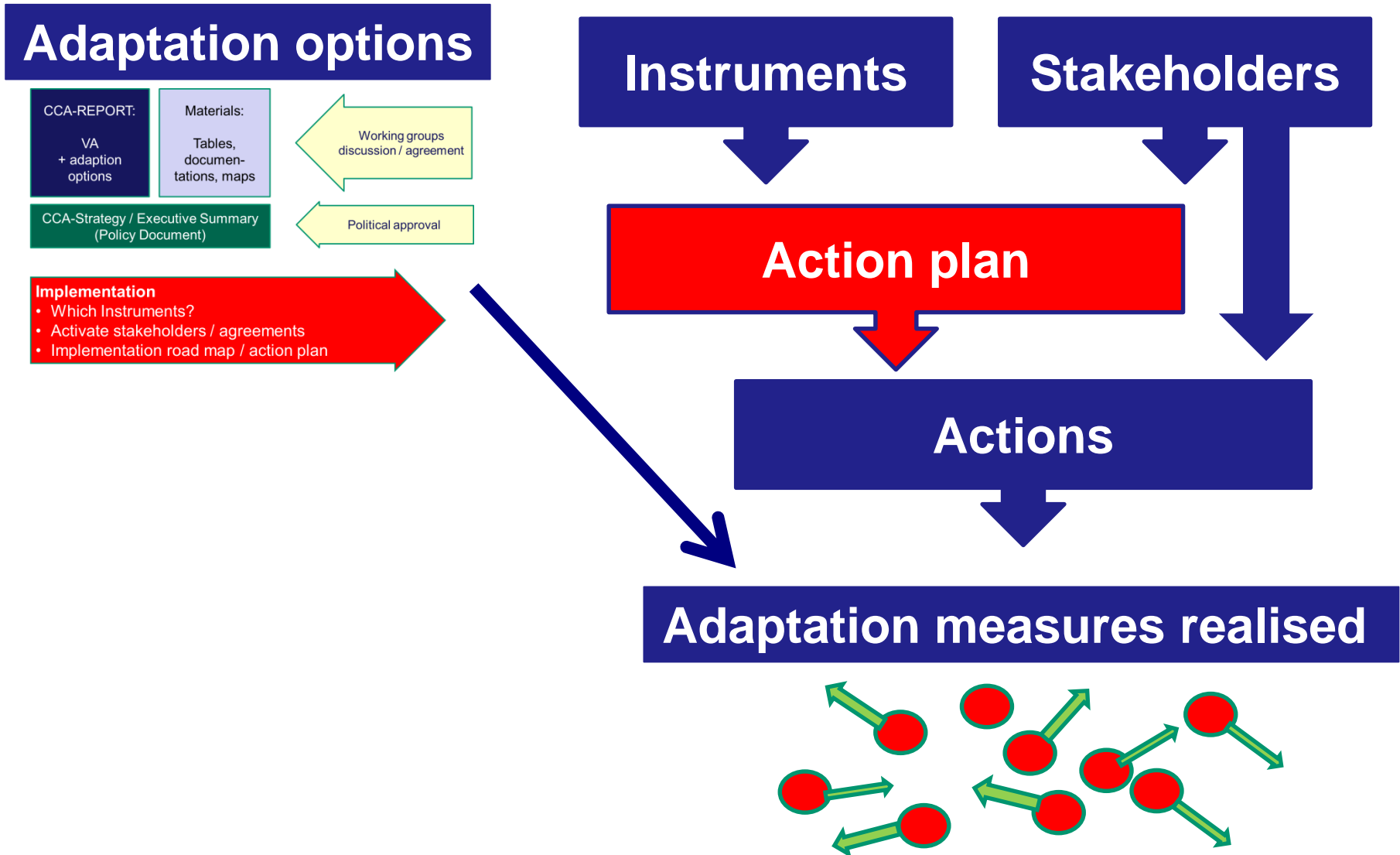
» Seek agreements with stakeholders responsible for implementation

» Develop an action plan

» SELF-CHECK

» 6. Monitoring and evaluation

# Step 5: Implementation



# From adaptation options to ACTIONS



## Result of country groups discussions on identification of already chosen or possible adaptation options

Sector	Options
<b>Agriculture &amp; environment</b>	<ul style="list-style-type: none"> <li>- Establishing a Subsidized Insurance System in (protection insurance against hail)</li> <li>- Focus on the improvement and maintenance of the irrigation systems, in agricultural and urban areas also to protect</li> <li>- Moratorium on forest cutting (10-years period)</li> <li>- Finding alternative water resources as a response to depleted aquifers</li> <li>- Moratorium on inert materials and sediment exploitation</li> </ul>
<b>Energy</b>	<ul style="list-style-type: none"> <li>- Establishing the new dam system in the Drin catchment and make room for the river</li> <li>- Achievement of the use of energy efficiency of transmission and distribution of energy referring to energy efficiency; targeting also heat islands in highly urbanized areas</li> <li>- Riverbed management and regulation in adjacent countries, preventing floods from upstream</li> </ul>
<b>Territorial planning &amp; urban development</b>	<ul style="list-style-type: none"> <li>- Limiting building and urbanization only within the limits according to in-process National Territorial Plans and</li> <li>- Chapter for CCA in the document of Integrated Coastal Management Plan for the Coast, translated into measures in the Municipalities</li> </ul>

**ACTION?**

- **WHAT?**
- **WHO? Resp.+involved**
- **HOW? instruments**
- **WHEN? Start-end**

### + Ressources

- Financial
- Human
- Funding

### + Communication

- stakeholder agreement
- information

Increased public awareness

**The following issues should be addressed:**

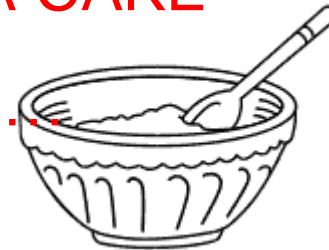
- 1. Ways for implementation** preferred adaptation options and including opportunities and synergies;
- 2. Roles and responsibilities**, explicitly considering the need for coordination between authorities at all levels;
- 3. Detailed timetable for implementation** and provisions for revision;
- 4. Estimation of human and financial** resources needed;
- 5. Funding possibilities**;
- 6. Open research questions** and ways to close knowledge gaps;
- 7. Potential barriers** to action and mechanisms to overcome these;
- 8. Mechanisms to monitor and evaluate** the implementation success.



# Development of actions for the action plan („road map for implementation“)

What do we mean?

- Adaptation objective → serve a meal
- Strategy → **MENUE** (many dishes)
- Adaption options → e.g. **CAKE**, soup, ...
- Action for Implementation → **BAKING A CAKE**
- Instruments → **OVEN, BOWL, MIXER, ...**
- Ressources → Eggs, flower, sugar ...
- Timeframe → before coffeetime
- Responsible → ... good question!
- Action Plan → **RECIPE BOOK** (= how to implement menu)



# Development of actions for the action plan („road map for implementation“)

## EXAMPLE

- Adaptation objective → reduce flood risk
- Strategy → flood risk management actions / flood protection
- Adaption options → e.g. keep floodplains free of buildings
- Action for Implementation → forbid constructions in floodplains, raise awareness for floodsafe constructions ...
- Instruments → laws to forbid ..., funds for floodsafe building ...
- Ressources → ministry (for improving law, funds from ...)
- Timeframe → asap, 12 months
- Responsible → Ministry for environment (or spatial devlelpm.?)
- Action Plan → one action = all of above



# Development of actions for the action plan („road map for implementation“)

## EXAMPLE

- Adaptation objective → reduce water consumption in agriculture
- Strategy → water saving agriculture + irrigation concept
- Adaption options → e.g. less water-intensive crops in draught areas, improve effectiveness of irrigation systems ...
- Action for Implementation → forbid certain crops in draught areas, raise awareness & funds for improved irrigation systems
- Instruments → laws to forbid ..., funds for ..., information ...
- Ressources → ministry of agriculture, agri-cooperations ...
- Timeframe → until 2017
- Responsible → Ministry for agriculture
- Action Plan → one action = all of above

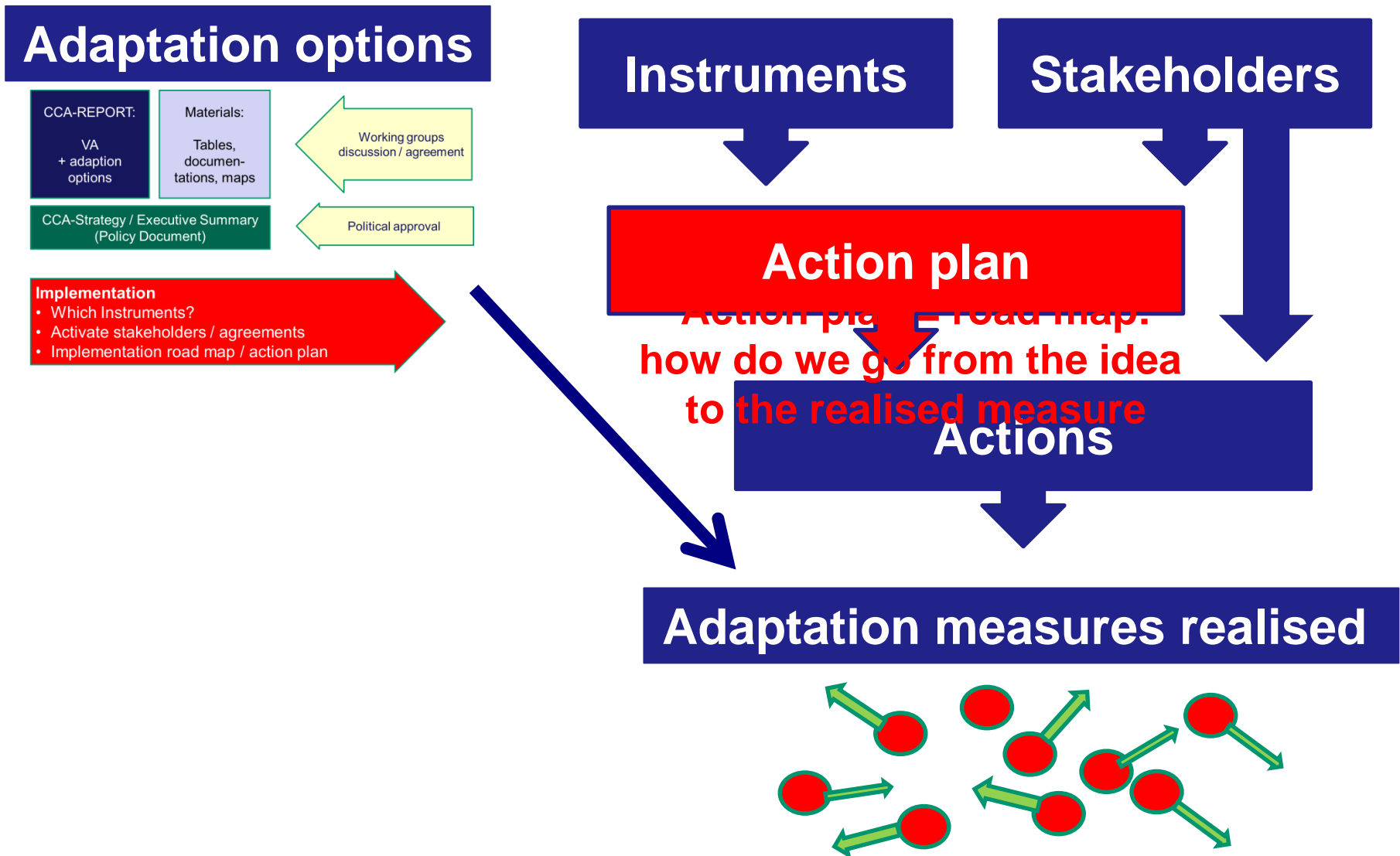
# Development of actions for the action plan („road map for implementation“)

## EXAMPLE

- Adaptation objective → reduce heat effects in effected cities
- Strategy → create 15% of urban surface as green space ...
- Adaption options → create cooling elements at buildings, more water in cities, more parks, unseal surfaces
- Action for Implementation → inform investors & architects about cost-effective solutions, raise awareness, building-standards ...
- Instruments → information, funds for ..., improved standards ...
- Ressources → persons + budget for information, funds, ...
- Timeframe → until 2020
- Responsible → ministry of urban development & buiding
- Action Plan → one action = all of above



# Step 5: Implementation



# Develop an action plan – key questions



<b>WHAT?</b>	Action		
<b>WHO?</b>	Responsible + involved		
<b>WHEN?</b>	Timeframe		
<b>HOW?</b>	Ressources + Instruments		
<b>FUNDS?</b>	Funding options		
<b>KNOW- LEDGE</b>	Open questions		
<b>BARRIERS?</b>			
<b>SUCCESS?</b>	M&E		

# Develop an action plan



<b>WHAT?</b>	Action	Ways for implementation preferred adaptation options	including opportunities and synergies
<b>WHO?</b>	Responsible + involved	Roles and responsibilities	explicitly considering the need for coordination between authorities at all levels
<b>WHEN?</b>	Timeframe	Detailed timetable for implementation	and provisions for revision



# Develop an action plan



<b>WHAT?</b>	Action	Ways for implementation preferred adaptation options	including opportunities and synergies
<b>WHO?</b>	Responsible + involved	Roles and responsibilities	explicitly considering the need for coordination between authorities at all levels
<b>WHEN?</b>	Timeframe	Detailed timetable for implementation	and provisions for revision
<b>HOW?</b>	Ressources + Instrument	Estimation of human and financial resources needed	and instruments in place or missing
<b>FUNDS?</b>	Funding options	Possible funds	and where to apply
<b>KNOW- LEDGE</b>		Open research questions	and ways to close knowledge gaps
<b>BARRIERS?</b>		Potential barriers	and mechanisms to overcome these
<b>SUCCESS?</b>	M&E	Mechanisms to monitor and evaluate, indicators	the implementation success



# **Adaptation Action Plan of the German Strategy for Adaptation to Climate Change**

adopted by the German Federal Cabinet on 31<sup>st</sup> August 2011

## **A. Introduction**

## **B. Approach and activities of the German Federal Government**

B.1. Pillar 1: Providing knowledge, informing, enabling

B.2. Pillar 2: Creation of frameworks by the Federal Government

B.3. Pillar 3: Activities for which the Federal Government is directly responsible

B.4. Pillar 4: International responsibilities

## **C. Adaptation activities in the Länder**

## **D. Activities undertaken by the German Federal Government in cooperation with the Länder**



# Examples of action plans

Selected actions to implement selected adaptation option				Detailed description / information of identified / selected actions					
No.	Adaptation option to be implemented	Actions to be taken	Comment / explanation for implementation	Relevant ongoing or planned projects or activities / research	Time horizon for completion	Responsible institution (involved)	Priority of action	Success indicator	Comments e.g. resources / preconditions / bottlenecks / cross-sectoral synergies or dependencies / instruments
24	Increase green roofs and green walls in cities suffering heat problems	Review and improve building act, standards for constructions	For certain cities and / or parts of cities strict regulations shall require greening of roofs etc. to improve cooling effects	Research projects on the effects of green roofs on heat island situations; environm. agency, 2015 - 2017	medium term (<2020)	PB; DoUP; DoEnv (see abbr. above)	HIGH	area of green roofs per km²	Legal situation has to be reviewed; legal study on restrictions regarding possibilities to restrict roof constructions to be clarified. Synergies with water retention to be evaluated.
		Funding programme for green roof constructions	National or regional funds shall be set up; applicants can be cities or investors	none	long term (<2025)	PB; DoUP; DoEnv (see abbr. above)	LOW	area of green roofs per km²	Budgets to be made available by national level. Set up funding programme at regional or national level.

# Example: Fact sheets per action

Ziff.	Bereich	Zeithorizont	Priorität
Ü-3	Übergreifend	Laufend	2
<b>Maßnahme</b>			
<b>Ausbau der regionalen Vernetzung zum Thema Klimawandel</b>			
<b>Kurzbeschreibung</b>			
Da der Oberrheingraben insgesamt zu den am meisten vom Klimawandel betroffenen Regionen in Deutschland gehört, sollte der regionale Erfahrungsaustausch zum Thema Klimawandel mit anderen Kommunen – auch länderübergreifend – entlang der Oberrheinschiene intensiviert werden, nicht zuletzt um erfolgreiche Anpassungsmaßnahmen zu diskutieren.			
<b>Federführung</b>		<b>Weitere Akteure</b>	
Anlassbezogen		Stadt Karlsruhe, andere Kommunen entlang der Oberrheinschiene, Verbandsebene (z.B. Trinationale Metropolregion Oberrhein, TechnologieRegion Karlsruhe, Regionalverband Mittlerer Oberrhein, Nachbarschaftsverband Karlsruhe)	
<b>Anmerkungen</b>			
Überschneidung/Synergien mit anderen Maßnahmen, zum Beispiel GE-3: Akteursnetzwerk Hitze und Gesundheit; GB-5: Wettbewerb „Klimawandelangepasstes Planen & Bauen im Bestand“; W-1: Netzwerk Klimawandel und Produktivität.			













# fact sheets for actions

Zukünftige Betroffenheiten gegenüber dem Klimawandel				
Wirkungsfeld	betroffener Sektor	Beschreibung	Handlungsbedarf*	
	Starkregen	Wasserwirtschaft, Ver- und Entsorgungsnetze, Katastrophenschutz, Privatpersonen	Lokale Überschwemmungen, Bodenerosion durch Starkregenereignisse, Vollaufen von Kellern; Drei Regenrückhaltebecken bereits installiert, ein weiteres ist in Planung; Zunahme von Starkregenereignissen erwartet.	→
	Trockenheit und Dürre	Naturschutz, Gartenbau; Land- und Forstwirtschaft	Austrocknen einzelner Biotope, Rotalgenbildung; Höherer Pflegeaufwand bei Bepflanzungen; Trockenes Frühjahr führt zu Problemen in Land- und Forstwirtschaft, besonders im Gemüsebau, Waldbrandgefahr; Zukünftig längere Trockenzeiten erwartet.	→
	Bodenerosion	Landwirtschaft, Verkehr	Bodenerosion v.a. nach Starkregen, Abschwemmungen des Bodens in die Ortslagen / auf Feldwege und Straßen; durch die Installation von neuen Schlammfängen im Gemeindegebiet aktuell wenig Probleme; Zunahme von Starkregenereignissen erwartet.	→
	Starkwindböen und Stürme	Forstwirtschaft, Ver- und Entsorgungsnetze	Schäden durch Stürme und Starkwindböen an Gebäuden und Bäumen, Windbruch; Zunahme von Starkwindböen erwartet.	→
Weitere Betroffenheiten				
	Sonstiges	Naturschutz, Land- und Forstwirtschaft, öffentliche Gesundheit	Ausbreitung von Neophyten und Neozoen sowie verstärkte Ausbreitung heimischer Schädlinge durch wärmeres Klima; Riesen-Bärenklau und Eichenprozessionsspinner bereits aufgetaucht; Zunahme durch Klimawandel und Globalisierung erwartet.	→
	Hitzebelastung	öffentliche Gesundheit	Hitzestress für empfindliche Bevölkerungsgruppen (z.B. in Kindergärten, Altenheimen); Zunahme von Hitzewellen erwartet.	→

\* Erläuterung: → Hoch → Mittel → Gering

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# fact sheets for actions

Handlungsoptionen zur Anpassung an den Klimawandel			
Handlungsoptionen	Wirkungsfelder	Wirkung	Bemerkungen
1. Dezentrale Regenwassernutzung / Versickerung stärken, z.B. Dachbegrünung, Rigiolen, Flächenversickerung, Förderung von Zisternen.	Starkregen, Hitzebelastung  	+	- Baugelbiet "Auenweg Süd": 100% dezentrale Regenwasser- versickerung - Gewerbegebiet "Ziegelei Süd": zentrale Versickerung
2. Maßnahmen zur baulichen Eigenvorsorge gegenüber Hochwasser / Überschwemmungen durch Starkregen, z.B. Sicherung befallender Gebäudeteile, Rückschlagklappen zum Schutz vor Kanarückstau.	Hochwasser, Starkregen  	+	In Sitzung festgeschrieben: Bürger werden darauf gesondert hingewiesen.
3. Entsiegelung von Flächen, z.B. betonierte Plätze - Schaffung von Grünstrukturen und Wasserflächen zur klimatischen Verbesserung, Beschattung und Abmilderung von Starkregenereignissen.	Hitzebelastung, Starkregen  	+	-
4. Trockenresistente Bepflanzung für öffentliche Plätze und Straßenbegrünung, Wasserspeicher anlegen und -entnahme anpassen.	Trockenheit und Dürre 	+	-
5. Bei Landwirten Bewusstsein für Erosionsschutz erhöhen; an kritischen Stellen Stabilisierung mit Vegetation, z.B. Hecken anlegen; Zeilspalten ohne Bodenbedeckung minimieren, z.B. durch Anbau von Zwischenfrüchten auf landwirtschaftlichen Flächen, Hangparalleles Pflügen.	Bodenerosion 	+	Insgesamt sind bereits neun Schrammfänge an erosionsgefährdeten Stellen installiert.
6. Naturschutz / Forstwirtschaft, Risikokarten oder -kalasler für gefährdete Baumarten und Neophyten / Schädlinge erstellen.	Trockenheit und Dürre, Starkwindböen und Stürme, Sonstiges   	+	-
7. Erhöhung des Gefahrenbewusstseins bei der lokalen Bevölkerung, v.a. bei empfindlichen Gruppen gegenüber Hitzestress; Verhaltensänderungen vorschlagen und Nachbarschaftshilfe unterstützen (z.B. für ältere Menschen, chronisch Kranke).	Hitzebelastung 	+	-
8.			

+ Entlastung: + Hoch → Mittel → Gering

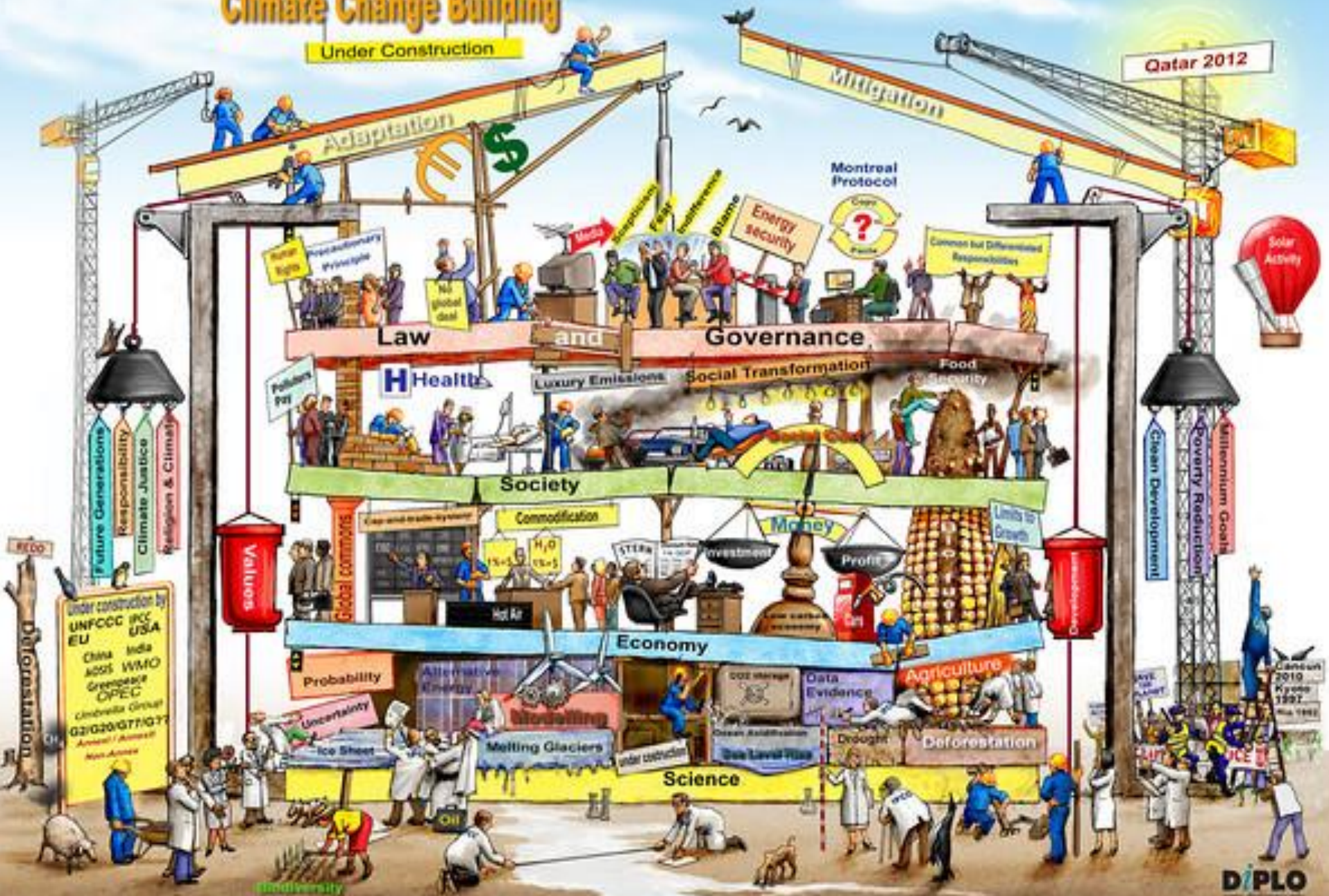
Projekte mit möglichen Synergien zu Anpassungsmaßnahmen		in Planung	in Umsetzung	gewählte Handlungs- optionen
Kategorie	Beschreibung			
Ausweisung von Neubaugebieten / Bauleitplanung	Bebauungspläne für Wohnen und Gewerbe	x	x	1, 2, 3, 4
Infrastrukturvorhaben	Kanaltbau und -sanierung an verschiedenen Stellen in Schnaathelm und Mosbach	x	x	2, 5
Investitionen im Bestand (Sanierungsmaßnahmen, Nachverdichtung)	Dorfneuerung Mosbach		x	1, 2, 3, 4
Neugestaltung von öffentlichen Plätzen und Grünanlagen / Renaturierungsmaßnahmen				
Sonstiges	Ausbau Regenrückhaltebecken Am Hebach, Ortseingang Mosbach	x		1, 2



# Climate Change Building

Under Construction

Qatar 2012



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# Proposal for the working session



## Result of country groups discussions on identification of already chosen or possible adaptation options

**ACTION?**

### Sector

#### Agriculture & environment

### Options

- Establishing a Subsidized Insurance System in Agriculture (Vineyards protection insurance against hail)
- Focus on the improvement and maintenance of the irrigation systems, in agricultural and urban areas also to protect the environment
- Moratorium on forest cutting (10-years period)
- Finding alternative water resources as a response to the depletion of aquifers
- Moratorium on inert materials and sediment exploitation

### Energy

- Establishing the new dam system in the Drin catchment area and make room for the river
- Achievement of the use of energy efficiency on the transmission and distribution of energy referring to the energy efficiency; targeting also heat islands in highly urbanized areas
- Riverbed management and regulation in agricultural countries, preventing floods from upstream

### Territorial planning & urban development

- Limiting building and urbanization only within the limits according to in-process National Territorial Plans and the Urban Planning
- Chapter for CCA in the document of Integrated Coastal Management Plan for the Coast, translated into measures in the National Municipalities

Increased public awareness

- **WHAT?**
- **WHO? Resp.+involved**
- **HOW? instruments**
- **WHEN? Start-end**

**+ Success-indicators**

**+ Ressources**

- Financial
- Human
- Funding

**+ Communication**

- stakeholder agreement
- information

# Proposal for the working session

Work with few examples:

1. Select some adaptation options (from your list)
2. Make table or fact sheet or similar
3. Name implementation actions (WHAT?), including:
  - a. WHO
  - b. WHEN
  - c. HOW
  - d. ...


# Develop an action plan



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<b>WHEN?</b>	Timeframe	Detailed timetable for implementation	and provisions for revision
<b>HOW?</b>	Ressources + Instrument	Estimation of human and financial resources needed	and instruments in place or missing
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**Never forget good  
Entry Points!**







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# **Implementation:**

**Entry-points, stakeholders and action planning**

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