



**Strengthening National Capacities to Manage Water Scarcity and Drought in
West Asia and North Africa**

Jordan Drought Management Case

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TOT Workshop

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Project Main Objective

The project's main objective is to analyze, map and identify the critical gaps in pre-impact and preparedness drought management planning and to strengthen the capacities of national planners, policy makers and stakeholders in Western Asia and North Africa countries.



Move from Reactive to Proactive Management Approach

Approach	Characteristics
Reactive	Actions after a drought event
Proactive	Actions designed in advance, with appropriate planning tools

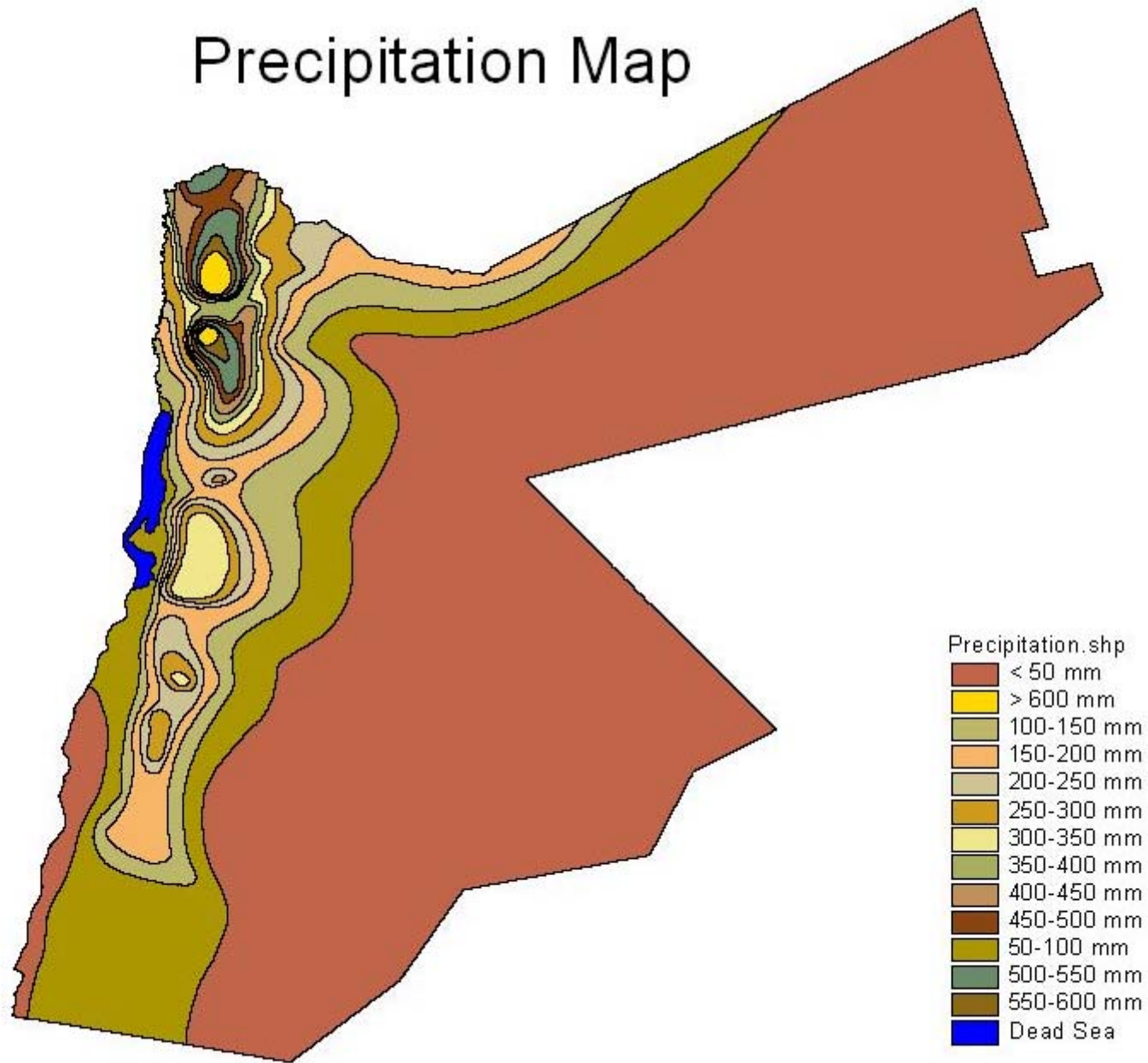
A large black arrow points downwards from the 'Reactive' row to the 'Proactive' row, indicating a transition or progression from reactive to proactive management.



Jordan Drought Impact

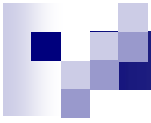
- Most of Jordan is desert , 90% of Jordan area get less than 200 mm/year
- Jordan water supply relies on rainfall, drop in rainfall has significant impact such as;
- Water shortage in water supply in the summer
- Many springs are completely dried,
- Drop of 1 m/year in average in groundwater level during the last 30 years
- Drop in the runoff in most wadis
- Invest in non conventional water supply projects such as desalination and use of fossil water from Disi
- Change in agricultural patterns in the Jordan Valley and highlands due to drop in rainfall
- Increase of imported fruits, vegetables, from Syria, Lebanon, and Egypt

Precipitation Map

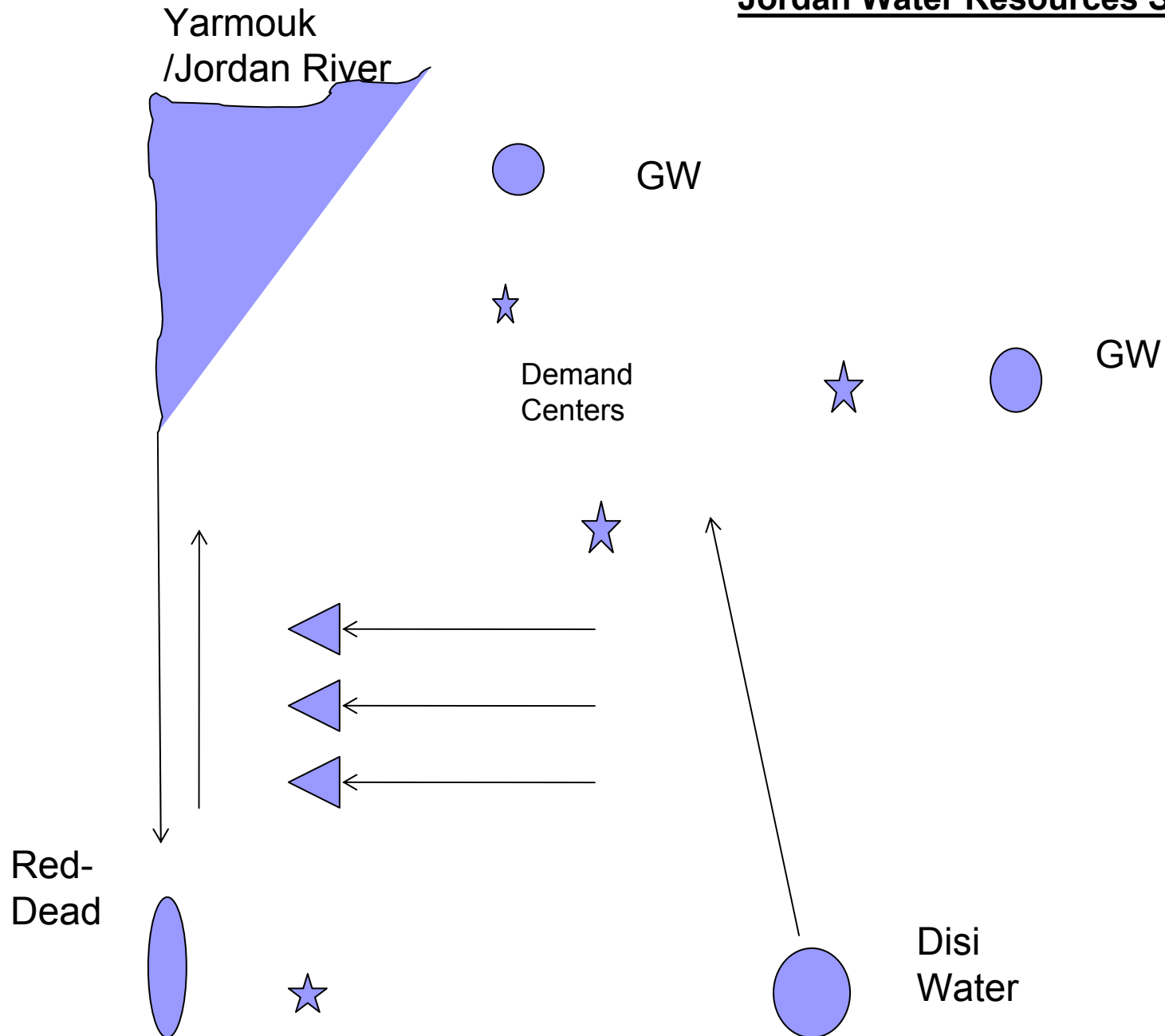


Distribution of Jordan, according to the rainfall and the area

Ecological zone	Average rainfall Yearly/mm	Area(million dunum)	% from Jordan area
Dry desert	< 100	71.2-82.2	81.0
desert	100-200	9.2-10.0	10.4
Semi desert	200-300	5.1-5.3	5.7
Semi-arid	300-500	1.6-1.7	1.8
Semi-humid	>500	1-10.1	1.1
Semi-humid	>500	1-10.1	1.1

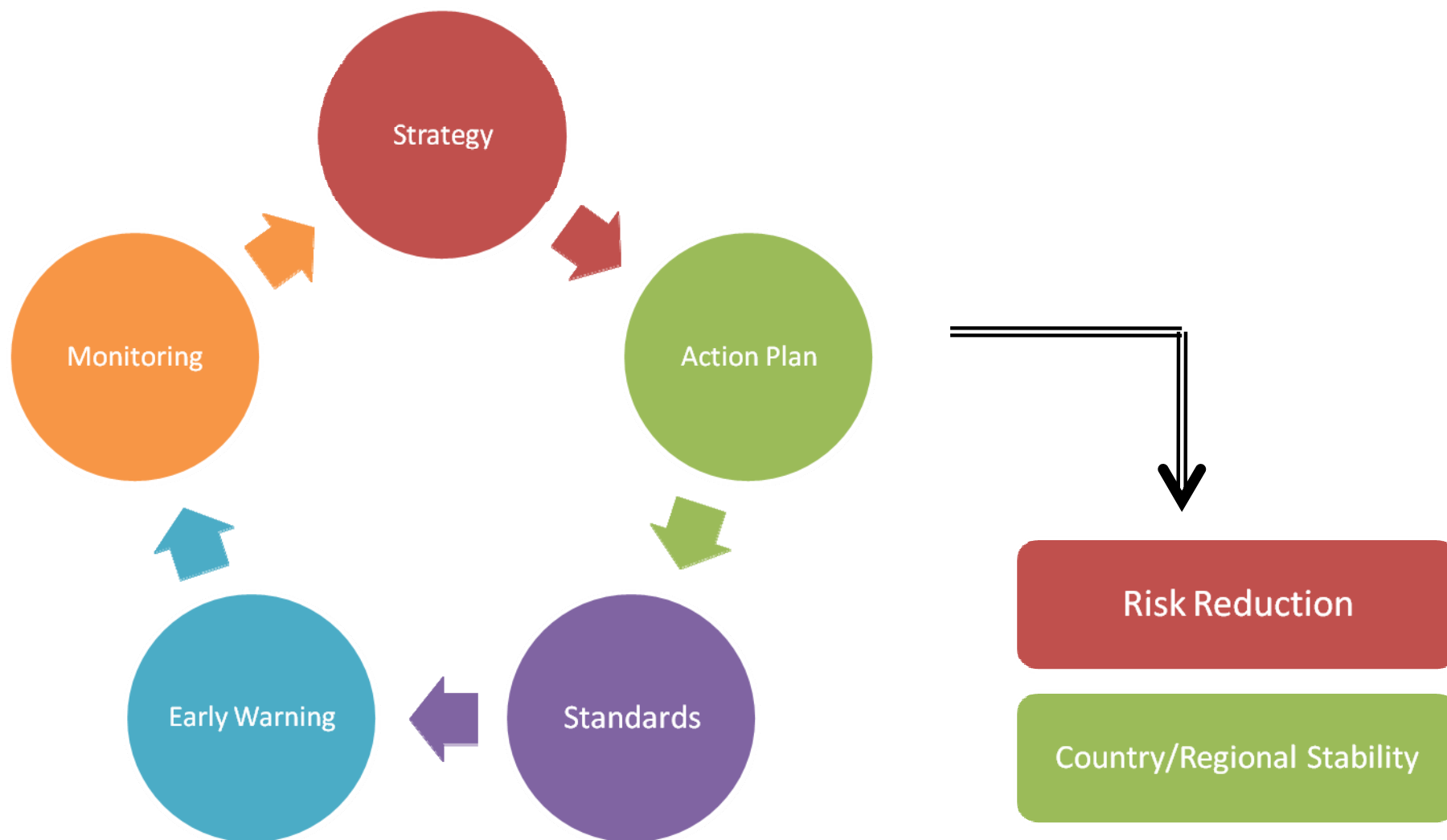


Jordan Water Resources System





Drought Management System





Jordan Gov. Activities Linked to Drought

The ministry of environment is working on implementation of the three Rio conventions;

- National Strategy and Action Plan to Combat Desertification , 2006- under update**
- National Policy on Climate Change, 2013**
- National Strategy on Biodiversity**



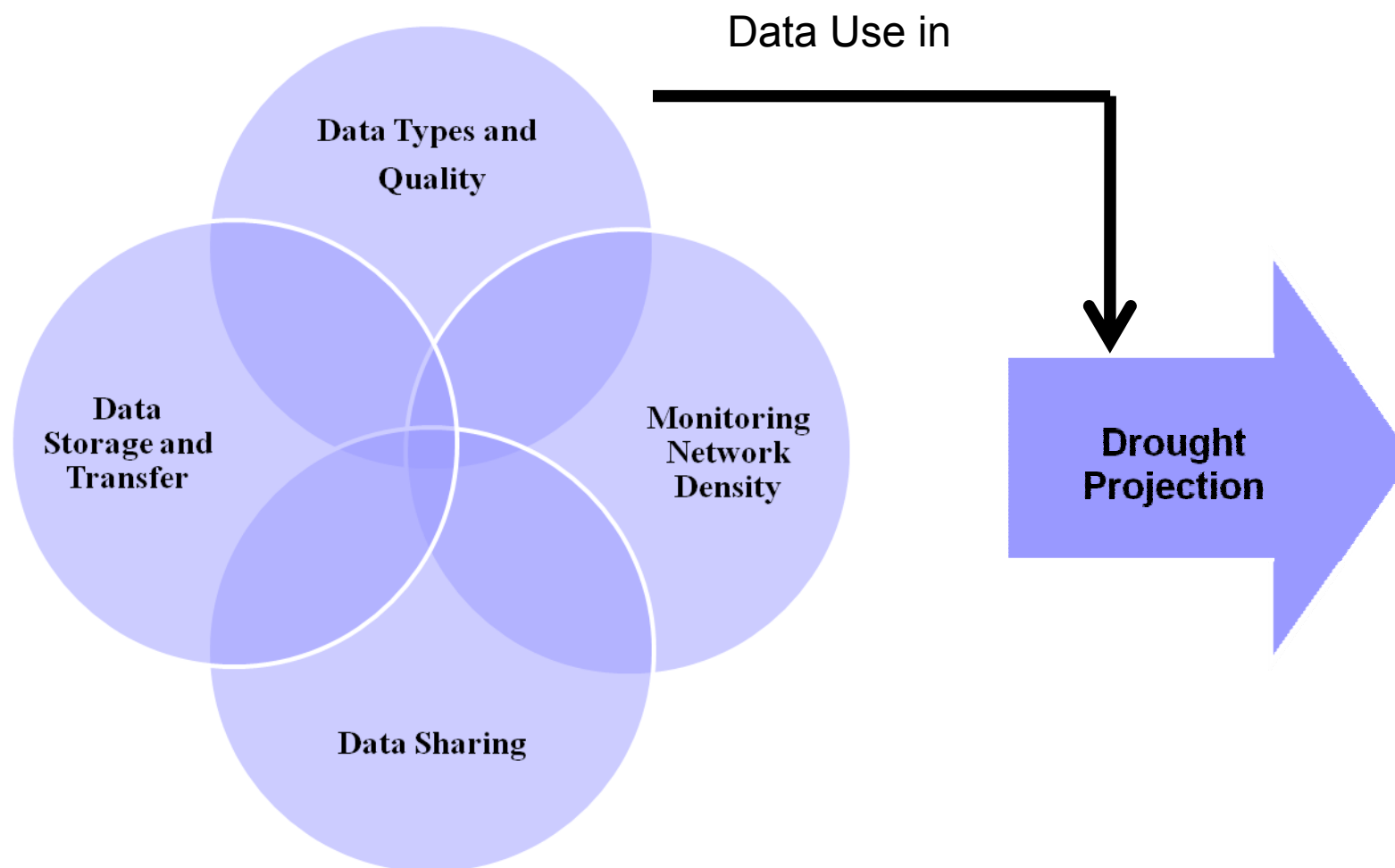
Drought Management Gaps

The following gaps were identified in Jordan drought management system:

- Responsible unit on drought management. The ministry of environment lead a steering committee to develop drought national plan then committee dissolved. The steering committee did meetings every 3 months.
- The Drought National Action Plan (NAP) is still a new document that requires an effective awareness program and a resource mobilization strategy. It can be considered as a framework for action at the country level.
- The involved ministries and organizations do not reflect drought issues in their plans
- Coordination between various ministries and stockholders
- International organizations funded several attempts and activities but lack integrated approach
- Drought classification indicators/index to identify the level of impact
- Drought projection
- Monitoring and early warning or monitoring systems.
- Mitigation plan.
- Adoption of Drought Guidelines



Monitoring and Early Warning and Systems Challenges





Summary Notes

Organization	Initiative /Project
UNCCD	Drought Capacity to Develop Policy / Countries Group
UNISDR	Disasters Risk Management Natural resources /Urbanization/poverty/ social/ economic
UNEP	Rangeland Impact due to drought Monitoring, Training (Yemen, Palestine, Iraq, Syria)
FAO	Drought Mitigation Strategies Water Scarcity Initiative Early Warning System Regional Initiative for climate change network (Arab Countries)
ICARDA	(Water and livelihood, Jordan, Syria, Palestine and Yemen)
ACSAD	Regional Drought Action Plan Establish Drought Units (Sudan, Egypt, Lebanon, Syria, and Libya)
WMO	Climate Watch/Projection Models Drought Policy with UNCCD Regional climate centers Heat waves and sand storms
ESCWA	Regional Climate Change Impact on Water Resources (Knowledge Base System)
CIHAM	Drought Guidelines, Measures, Indicators for Medetrnian region (Morocco and Tunisia), training courses

مشروع مع وزاره الزراعة

- اسم المشروع مشروع ادارة الجفاف في سورية والأردن ومصر ولبنان
- اسم الدولة : سورية،الأردن،لبنان،مصر
- تاريخ البدء **2010 :**
- تاريخ الانتهاء **2012 :**
- الهدف الرئيسي : تأمين إطار عمل بمنهجية فاعلة للحد من وتقليص آثار الجفاف
- الأهداف الثانوية:
- مراقبة وتوصيف خصائص الجفاف لوضع نظم يمكن تطبيقها،
- تأمين نظم فاعلة لتقييم مستوى مخاطر الجفاف وما يصاحبها من عواقب محتملة الحدوث على مختلف المحاور والنظم القائمة من أنظمة زراعية ونظم توفير المياه للاستخدامات المختلفة .
- تقييم القابلية للتضرر وتقديرها لتحديد اسباب المخاطر الراجعة للهيكلية القائمة، او لنظم الادارة، او للتكنولوجيات المستخدمة او لاسباب اجتماعية او اقتصادية غير مناسبة او لعدد من هذه الاسباب او كلها مجتمعة
- الجهات المستفيدة : سورية،الأردن،لبنان،مصر
- الجهات الممولة : الوكالة الألمانية للتعاون الفني GTZ القائم.
- النتائج المتوقعة:
- 1.تحقيق التناغم في نظم ادارة الجفاف في المستوى الوطني بين الدول العربية مع المستوى الاقليمي العربي.
- 2.تقييم مخاطر الجفاف على المحاور المختلفة (الزراعة ونظم الامداد بالمياه)
- 3.تحديد المناطق ذات القابلية للتضرر
- 4.تطوير نظم لمراقبة أثر الجفاف علي المحاصيل في مراحل نموها المختلفة.
- 5.اعداد مؤشرات الجفاف بما يتناسب مع خصائص المناطق المختلفة.
- 6.توزيع النتائج لتقوية نظم دعم القرار



Jordan Tasks

Action	Status
Establish Drought Management Steering Committee from various Stakeholders (ministry of water has the lead with representatives from ministry of environment, ministry of agriculture and ministry Metrological department. Other members are from RCN, IUCN, UNDP, FAO and Jordan University.	Done
Define the roles and responsibilities of steering committee members and form responsible body on drought management.	In progress
Train national team on the use of drought standards and guidelines	In progress
Develop drought management strategy for Jordan	Planned
Prepare drought management action plan	Planned
Develop drought management mitigation plan	Planned
Develop monitoring and early warning system	Planned