



ROADS FOR WATER SECURITY WATER FOR ROADS SAFETY

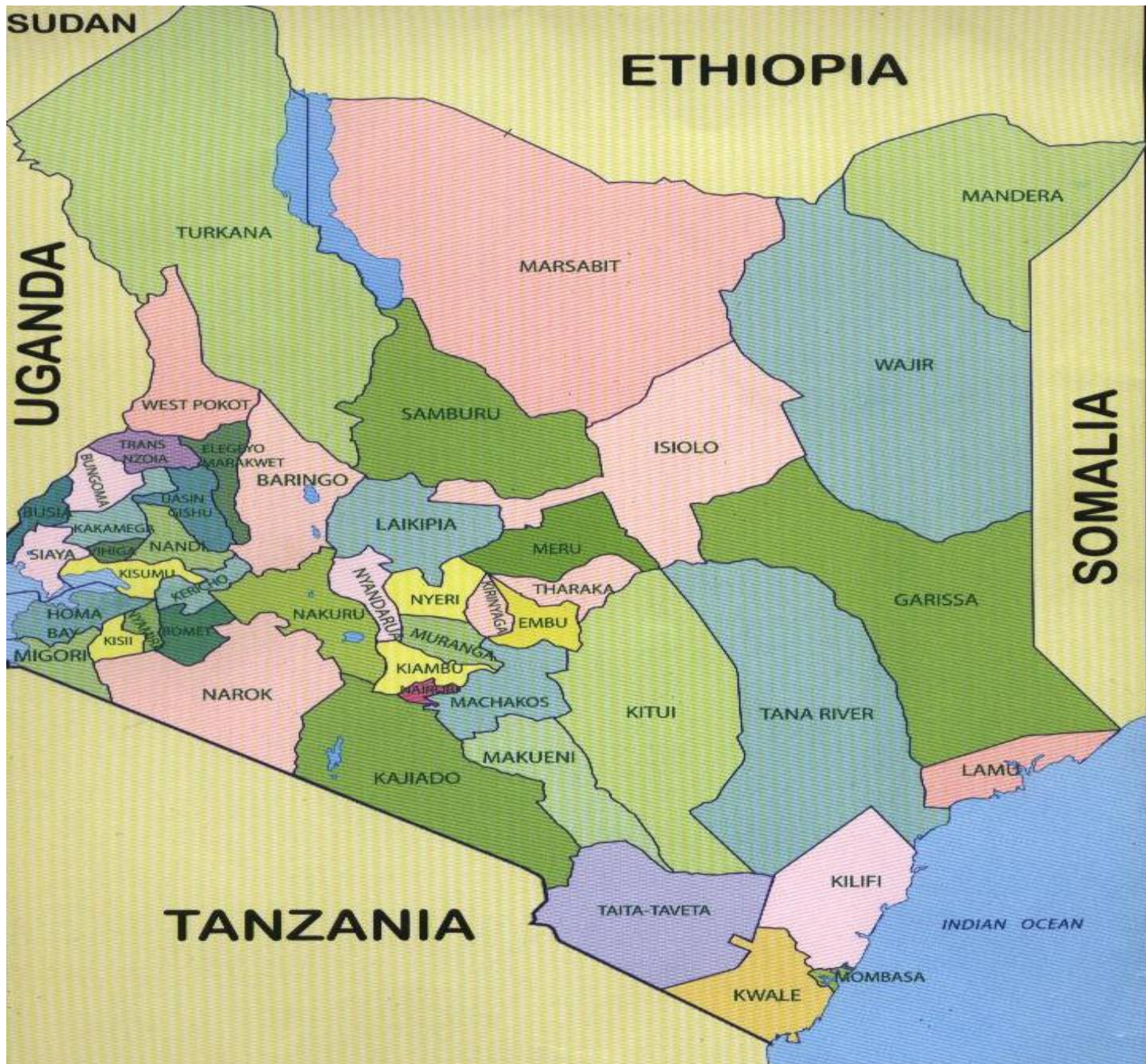
IMPROVING LIVELIHOOD CREATING RESILIENCE

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Outline

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1. Introduction & Background Information.
2. Success story
3. Key Examples
4. Approaches
5. Plans/Timelines

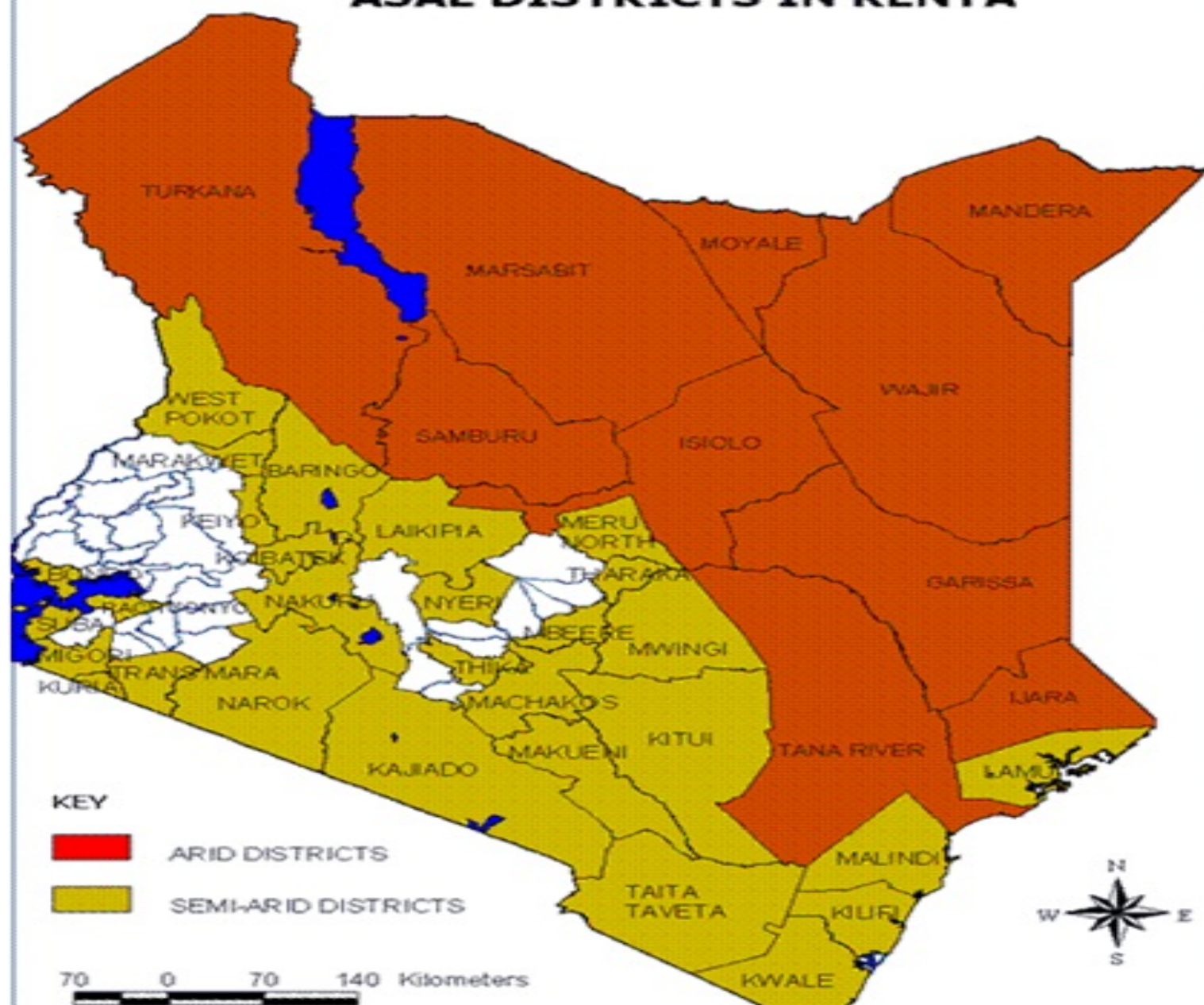


Introduction: Location, Size & Climate.

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- Machakos County is one of the 47 counties in Kenya.
- The county borders Embu, Murang'a and Kiambu to the North, Nairobi and Kajiado counties to the West, Makueni County to the South and Kitui County to the East.
- The county covers an area of 6,208.20 km² with most of it being semi-arid.

ASAL DISTRICTS IN KENYA



Administrative units & Land

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- Administratively, Machakos County is divided into eight sub-counties, namely Machakos, Masinga, Yatta, Kangundo, Matungulu, Kathiani, Mavoko and Mwala.
- Land has generally been under-exploited for agricultural production.
- Only 31 percent of land in the high and medium potential area is under production which represents only 5 percent of the land in the county.
- Semi-arid lands represent 84 percent of the land and also remains largely underutilized.

Demographic Characteristics

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- The county had a population of 1,098,583 as per 2009 Kenya Population and Housing census (male—49 percent, female—51 percent) with an age distribution of 0-14 years at 39 percent, 15-29 years at 28 percent, 30-64 years at 27.7 percent and 5 percent above 64 years (GoK, 2010).
- The population annual growth rate is 1.7 percent.
- The population is projected to increase to 1,238,650 and 1,289,200 by 2015 and 2017, respectively.

Demographic Characteristics

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- The county has a population density of 188 per km² with Kangundo constituency having the highest density of 565 per km².
- Masinga constituency is the least densely populated with 95 persons per km² mainly due to unfavorable weather conditions.
- The poverty level in the county is at 59.6 percent against a national average of 47.2 percent based on KIHBS (2009).
- This positions the county at 33 out of the 47 counties.
About 52 percent of the population lives in the urban centers, way above the national average of 29.9 percent.

Water

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- Current access to quality water is estimated at 30%.
- As indicated earlier the county has a high population of 1,098,583.
- Therefore the demand for water is very high in this county.
- In fact the demand for water exceeds the water resource available.
- The county experiences harsh climatic conditions and has very little vegetation cover.

Water

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- This has led to a decrease in volume of surficial water in the county.
- Therefore the residents depend mainly on underground water.
- The government and non-governmental organization's have helped in construction of boreholes.
- The boreholes being constructed in this county face one major problem, borehole failure.
- The county has a borehole failure rate of 20%.

Water

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Borehole failure is caused by several factors.

- Geology of the area was one of the major factors.
- The dominant lithologies in the area are metamorphic and igneous rocks.
- These rocks are known to be compact and very dense and therefore they do not make good aquifers.
- Over-extraction is also another problem especially in the major towns like Machakos town.
- Precipitation of minerals in the aquifer causes blockages and this leads to borehole failure.
- Climate is also another factor. The county experience prolonged droughts. This leads to fall in the water table.....

New Dawn on Water provision....

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County Integrated Development Plan of 2015

- The background information on this plan is the basis upon which this County Integrated Development Plan has been grounded on.
- The background information covered in includes the priorities identified under the manifesto of H. E. the Governor.
- The manifesto was aimed at tackling the basics of life to eliminate abject poverty and one of the core/priority issue was provision of water to all the households in the county.

New Thinking on Water....

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- The county now has about 746 operational boreholes.
- Water is currently been reticulated to households.
- However recharge of underground water is necessary.
- The road for water program has given a path to this recharge in that storm water can easily be harvested.

New Dawn on Water provision....

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- MetaMeta introduced the program in Machakos last year August, 2016
- Since then, we have engaged the community in Capacity Building in the Month of October, 2016.
- The focus been on two subcounties of Yatta and Masinga.
- Public sensitization was done at the inception of the program at Kateki, Maiuni, Ikombe, Kithito & Katangi
- A field trip to Kathiani-Kangundo road on 28/September/ 2016 was also done.



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Training of Farmers by Metameta team at Katangi

Yatta Machakos



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Training of Farmers at Ikombe yatta by Metameta

Yatta Machakos



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Training of Technical team for Yatta & Masinga

Matuu MAchakos

Water provision....

Approaches/Success...

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- After training of technical person
 1. 36 SHG in Masinga sub county have been trained which is approximately 600 farmers.
 2. A number of farmers have already adopted doing zai pit, terracing and diverting water from road.
 3. Sensitization is ongoing and more farmers are expected to adopt road for water harvesting.
 4. The roads department in consultation with department of water and farmers have diverted service run off to borrow pits in exchange for Gravel

Water provision....

Approaches...

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-The technical team in Yatta has divided the area into three road run off diversion points and are working with farmers as follows:-

1. Katangi to Ikombe – 104 farmers – Muli Syengo
co-ordinator
2. Kyasioni to Matuu – 65 farmers – Benedetta Mulewa –
co-ordinator
3. Ikombe to Kyasioni – 172 FARMERS – Joseph M. Masila –
Co-ordinaor

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The Yatta Canal a project that is serving major town of Matu, Kithimani & Sofia

Yatta Subcounty - Machakos





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Trench on a farm along Masinga-Kivandini Road

Machakos County







Challenges...

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- Attitude...
- In adequate Budgetary allocation.
- Lack of available space to discharge storm water particularly in densely populated areas.
- Lack of policy framework on road-water harvesting; but currently been developed.

Water provision.....

Success/Wayforward

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- The following has also been done or been undertaken:-
 1. Identified slope areas for planning purposes
 2. Beneficiaries will construct/dig/excavate ponds
 3. Reach out to as many farmers as possible before on set of April/May rains.
 4. Laying of structures currently on going.
 5. Partnership with community to give gravel in exchange of a dam.
 6. More community sensitization to heighten awareness.

Asanteni Sana.....

Thank You!

Let's travel together

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