



agriculture,
forestry & fisheries

Department:
Agriculture, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA



DEPARTMENT OF
AGRICULTURE AND RURAL DEVELOPMENT

Policies and legal frameworks to advance smallholder irrigation in South Africa

**Barbara van Koppen, International Water Management Institute
with
Department of Agriculture, Forestry and Fisheries
Limpopo Department of Agriculture and Rural Development**

NATIONAL IRRIGATION STRATEGY 2015

‘RECOGNIZE DIVERSITY AMONG SMALLHOLDERS’

FOUR CATEGORIES

1. Smallholder irrigation schemes - individual plots
2. Smallholder irrigation schemes – joint ventures with agri-business
3. Informal irrigation for self-supply by individuals or groups
4. Homestead cultivation

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‘RECOGNIZE DIVERSITY AMONG SMALLHOLDERS’

FOUR CATEGORIES

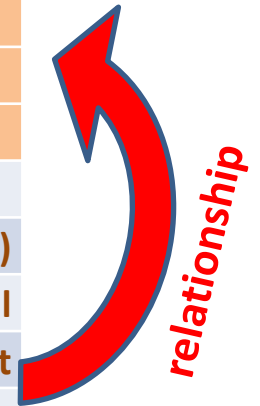
- 1. Smallholder irrigation schemes - individual plots**
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JONATHAN DENISON ET AL: ASSESSING PERFORMANCE OF 102 SCHEMES IN LIMPOPO

102 schemes

	Variable	Descriptor
Dependent variables (scheme performance)	Var 1	Status in 2010
	Var 2	Years Operated
	Var 3	Winter cropping intensity
	Var 4	Summer cropping intensity
	Var 5	Commercialisation (business complexity)
Independent variables (factors impacting on performance)	Var 6	Command Area
	Var 7	Plot size (average)
	Var 8	Rainfall
	Var 9	Proximity to Market
	Var 10	Soil Suitability Index
	Var 11	Energy Source
	Var 12	Infrastructure condition index
	Var 13	Water resource constraint score
	Var 14	Conflict score
	Var 15	Land exchange index
	Var 16	Market diversity score
	Var 17	Agricultural information index
	Var 18	Main irrigation method

performance



relationship

characteristics



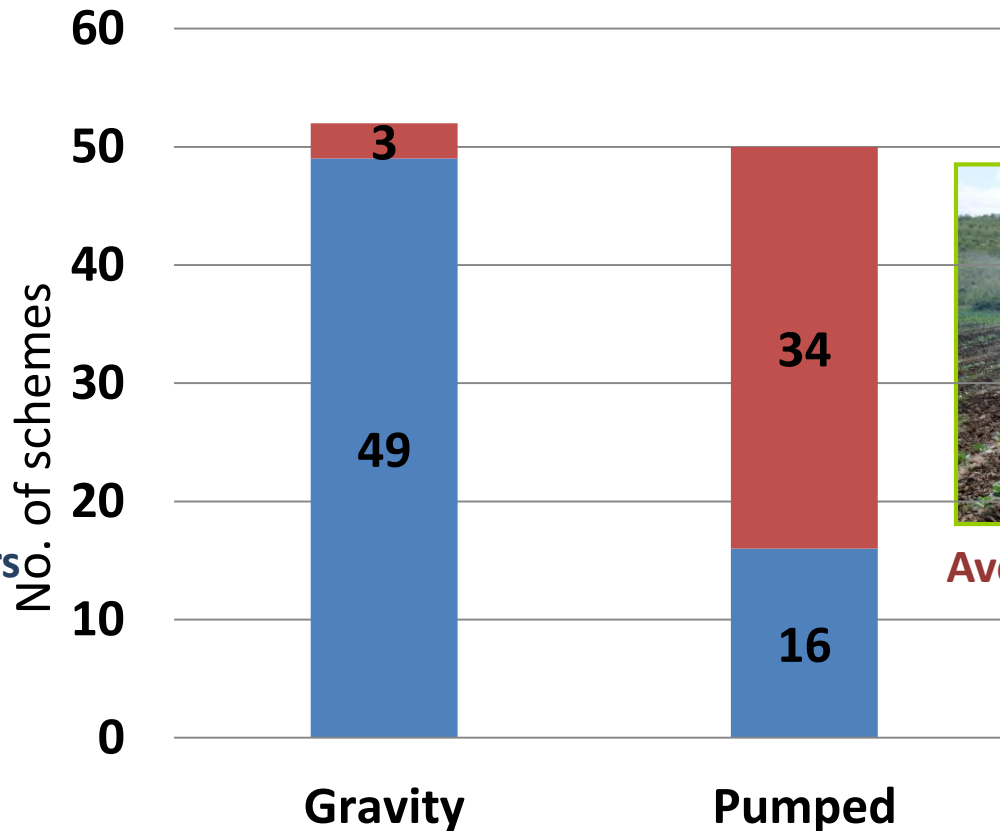
JD: INFRASTRUCTURE TECHNOLOGY CHOICE

GRAVITY-CANAL SCHEMES - LIFE MUCH LONGER THAN PUMPED SCHEMES
PUMPED SCHEMES - MUCH GREATER INCIDENCE OF FAILURE

Gravity-canal
94% operational



Average lifetime 48.1 yrs



Pumped
32% operational



Average lifetime 13.5 yrs

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‘PLAN IN A PARTICIPATORY MANNER WITH FULL RESPECT FOR FARMERS’ PREFERENCES’



6 steps in participatory planning

1. Introducing MUS to community, municipality and other stakeholders (IDPs)

2. Diagnosis Situational assessment, problem analysis

3. Solutions: Visioning, developing capacity, technical and other options

4. Plan: Prioritization, fitting the financial framework, other support, and adopt final plan

5. Implementation: Procurement, construction and capacity development

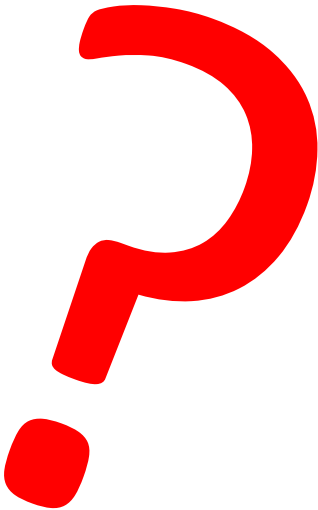
6. After-care and evaluation: capacity development, monitoring and evaluation

IRRIGATION STRATEGY 2015

‘RECOGNIZE DIVERSITY AMONG SMALLHOLDERS’ FOUR CATEGORIES

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FAILING JOINT VENTURES



WHOSE BUSINESS? CAPACITY DEVELOPMENT OR DIVIDEND?

- Centralized irrigation, so handing over land
- No other options
- No transparency of farm budget and losses
- Limited job creation due to mechanization
- No capacity development for inputs, implements, production process, markets
- Bearing all risks
- Nowhere to go with conflicts; blaming LDA

NATIONAL IRRIGATION STRATEGY 2015:

- **stop** encouraging joint ventures with strategic partners **from the top down**, and only accept joint ventures for funding if farmers had contractually and factually been involved as **decision makers**;
- ensure that the strategic partner should **transfer skills**; and
- monitor the joint venture's **contractual agreements** and mediate in conflict resolution.

A range of options of land tenure, engineering, agribusiness

Ex: Jonathan Denison on Shire Valley Transformation Project in Malawi

Pathway 1: Agri-business Managers



Pathway 2: Smallholder Agri-business



Pathway 3: Leased farms (mixed model)



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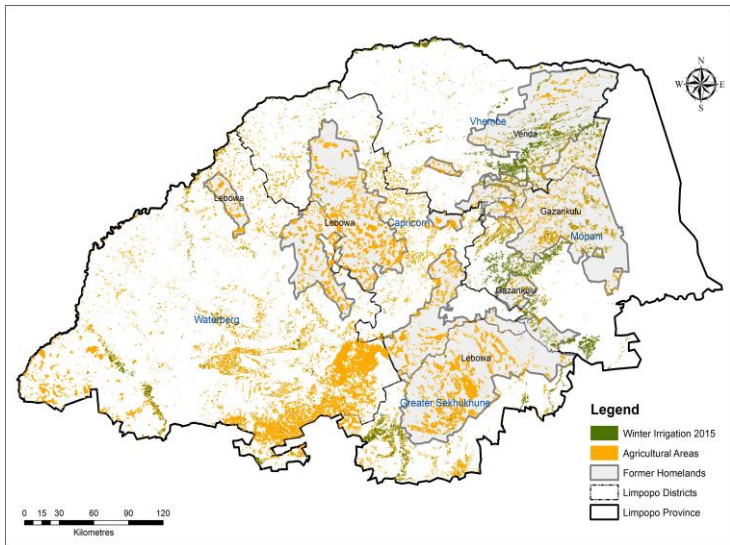
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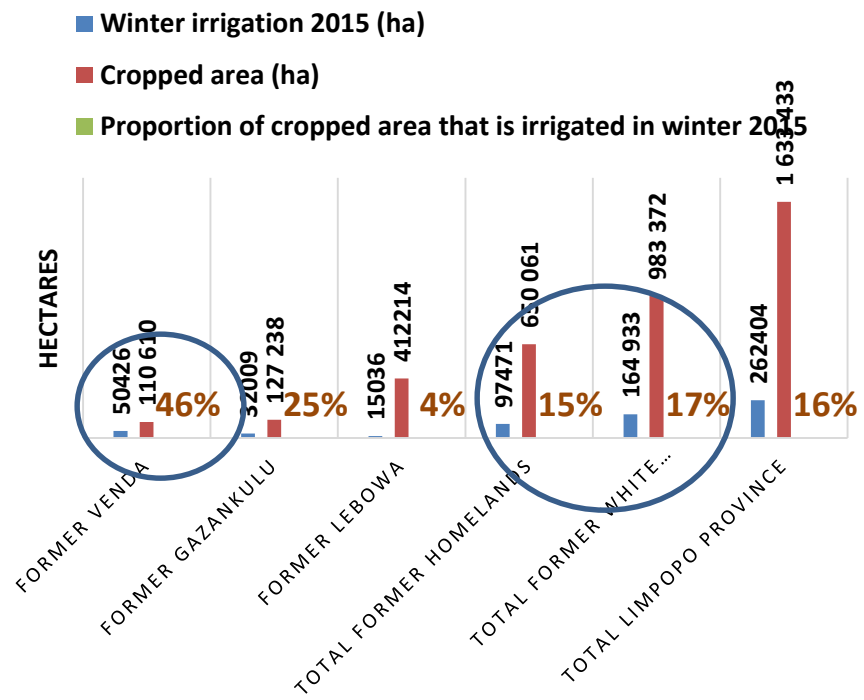
IRRIGATED AREA MAPPING LIMPOPO PROVINCE

WORLD BANK: A REVOLUTION ALREADY IN PROGRESS

~ 70,000 ha informal small-scale irrigation



2015 WINTER IRRIGATED AREAS AND CROPPED AREAS



FINANCIAL TIMES

Opinion **beyondbrics**

+ Add to myFT

We must decolonise water rights for Africa to advance

The majority of small-scale farmers have no legal access to water



Millions of small-scale farmers who need water to make a living are in effect trapped in a situation that renders their water use illegal. [X](#) [AI](#)

Barbara van Koppen and Barbara Schreiner YESTERDAY

The aftermath of colonialism plagues Africa to this day.

In South Africa, the government is restoring to black South Africans land that

ILLEGAL OFFENDERS, MARGINALIZED EXEMPTIONS?

TOWARDS A HYBRID APPROACH TO WATER LAW IN AFRICA

Permits are an excellent tool for the regulation of high impact water use



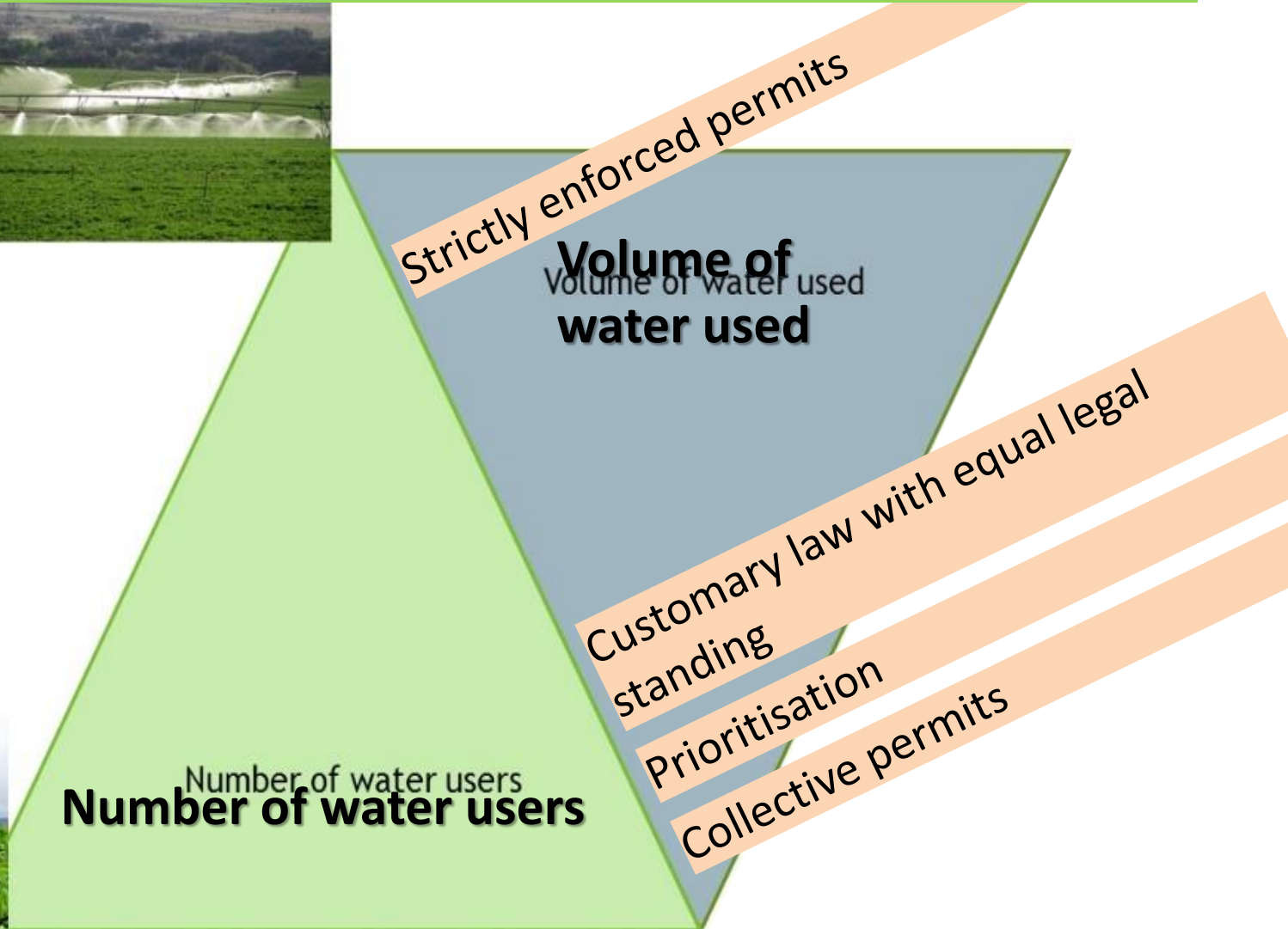
Strictly enforced permits
with clear and
enforceable conditions

Volume of
water used

Number of water users
Number of water users



Hybrid water rights system: a context specific system that is based on a range of appropriate and implementable tools



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Self-supply for multiple uses: Tshakuma: 11 gravity schemes; 2260 households



Building on communities' self-supply for multiple uses: more cost-effective and sustainable?



Ha-Gumbu



Ga-Mokgotho



Thank you

Flag Boshielo Scheme

Strydkraal

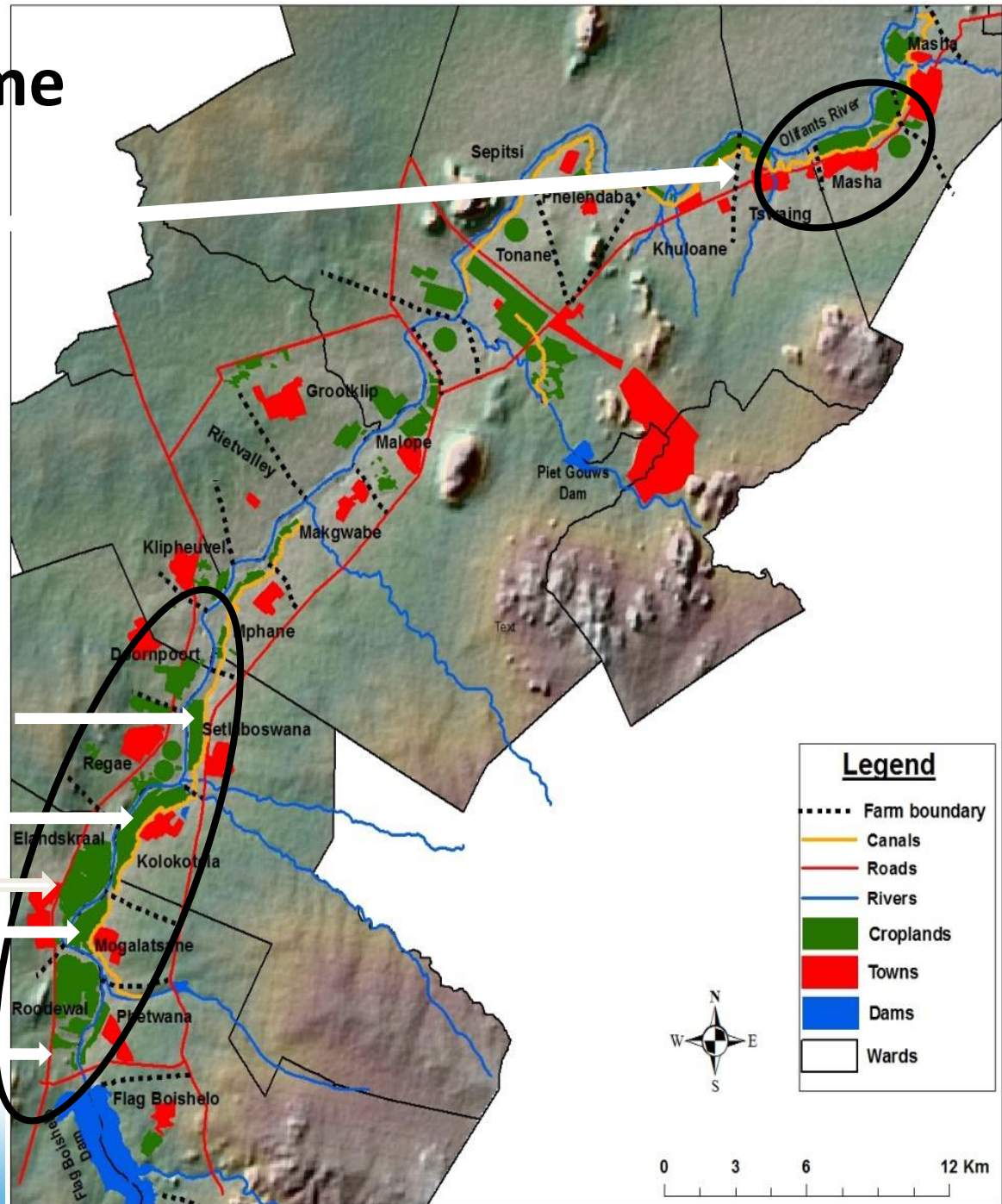
Setlaboswana

Kolekotela

Elandskraal

Mogalatsane

Phetwane



Legend

- Farm boundary
- Canals
- Roads
- Rivers
- Croplands
- Towns
- Dams
- Wards