# *The South African Water Landscape*

## *THE PERFECT STORM*

## *THE PERFECT OPPORTUNITY*

## *THE CONVENIENT TRUTH*

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- **Basic facts:**
  - 98% of water resource allocated since 2018
  - 60% agriculture, 30% towns & cities, 10% industry, mining & energy generation
  - 47% NRW
  - Complex government architecture
  - Water resource nationalised in 1998
  - Dammed up
  - Excellent water genetics (RO, DPR, IPR, Inter-basin transfers & Drop Reports)
  - 97% of STP's non compliant
  - Over 50% of water systems in poor conditions
  - Municipal services not ring fenced
  - Poorly performing WSP's
  - 144 WSA's and 257 munis
  - IWR not yet implemented
  - Deep politicisation of water services
  - Well developed legal and policy frameworks but not well implemented
    - Water Act 1956
    - Water Security Framework NDP 2030
    - Reindustrialisation Plan
    - NIP 2050
  - Institutional capacity hollowed out
  - Increased competition for a reducing reserve
  - 2025 Water Indaba/Summit outcomes

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- **Opportunities:**
  - NRW
    - Leak detection
    - Smart Analytics
    - Funding
    - Trenchless piping & Piping
    - IOT devices, C&I
  - Reuse
    - Municipal sewage
    - Industrial process waters
    - Commercial
    - Tourism
    - Aquifer recharge
  - Desalination
    - Ground water
    - Sea water
- **How:**
  - Capacity building
  - Digitalisation
  - Localisation
  - SPV's, PSP's & PPP's
  - Unsolicited bids & innovation adoption enhancements
  - WPO (Water Partnership Office)
  - WSP's licencing regime
  - Nexus: Water-Waste-Energy
  - Collaboration

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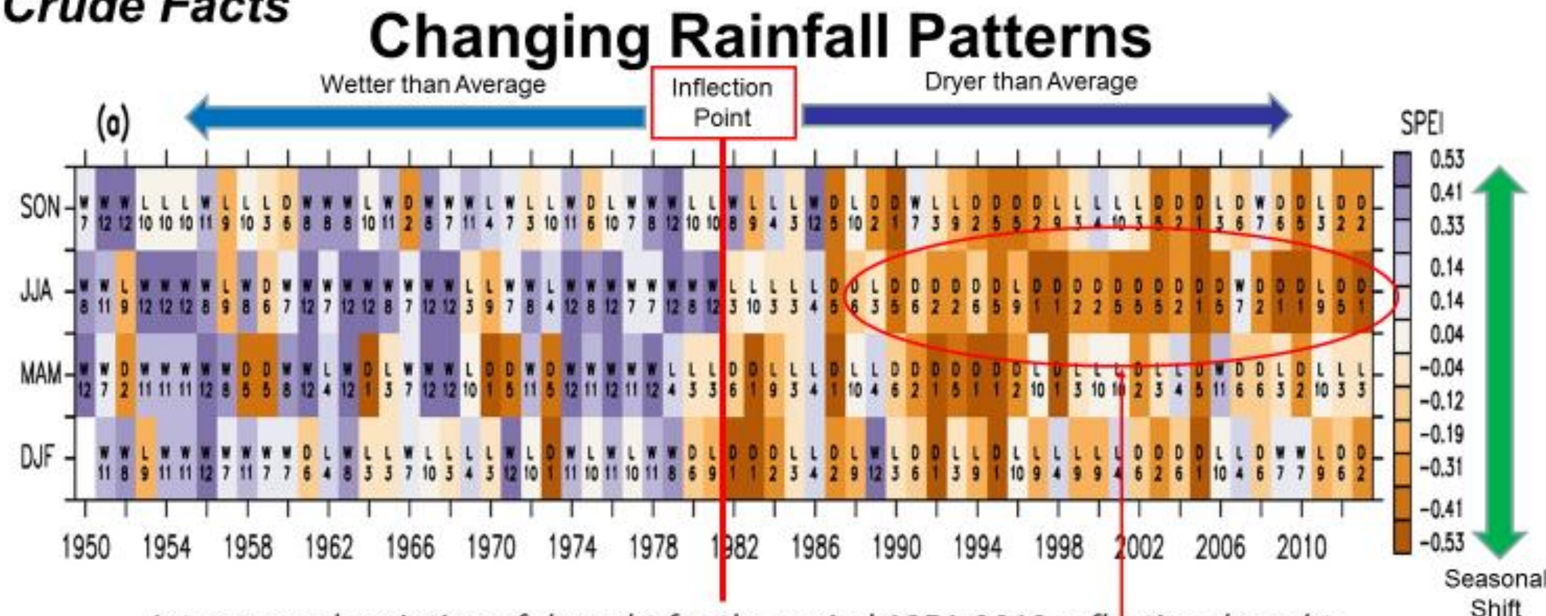
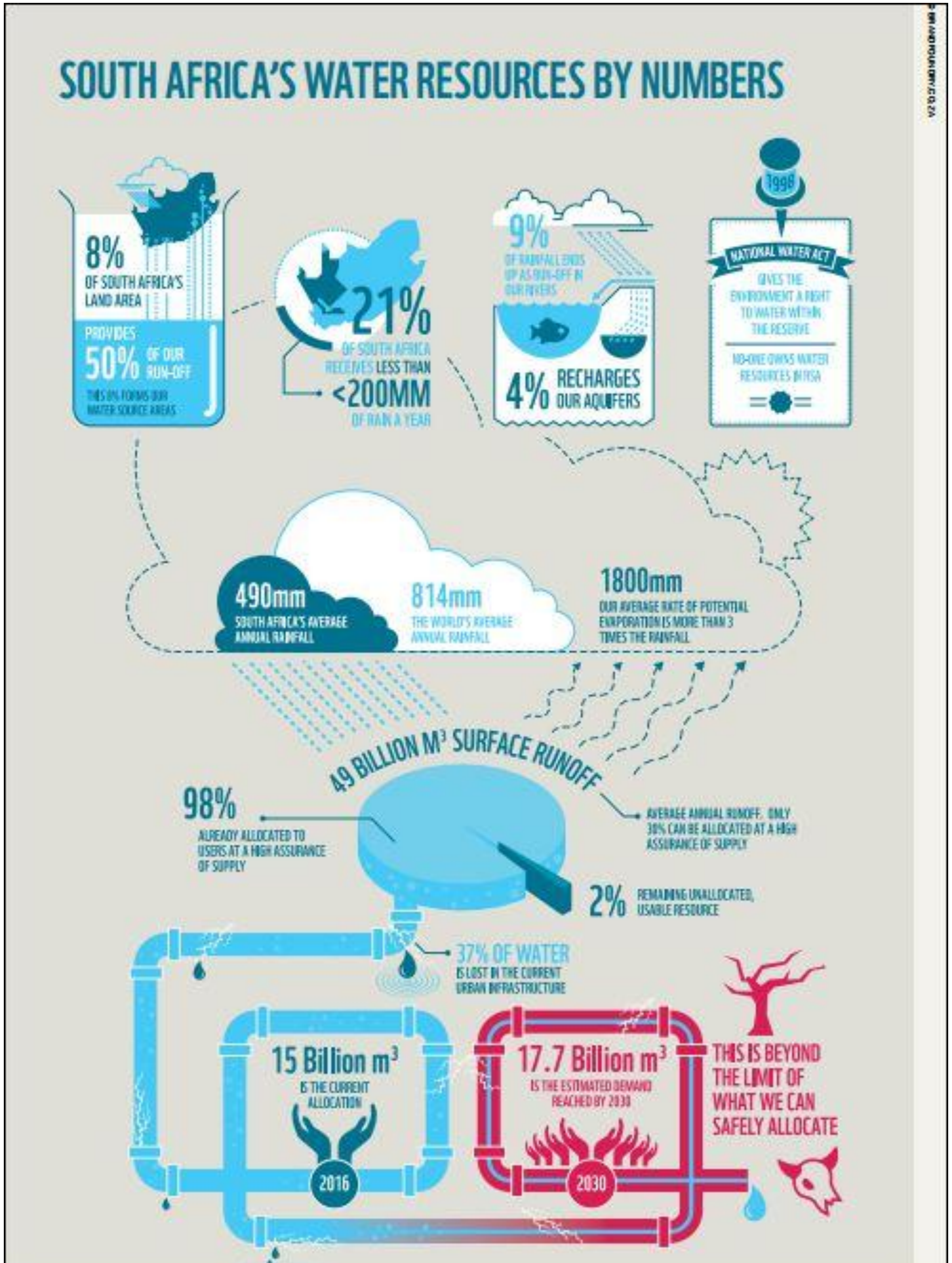
***Crude Facts***



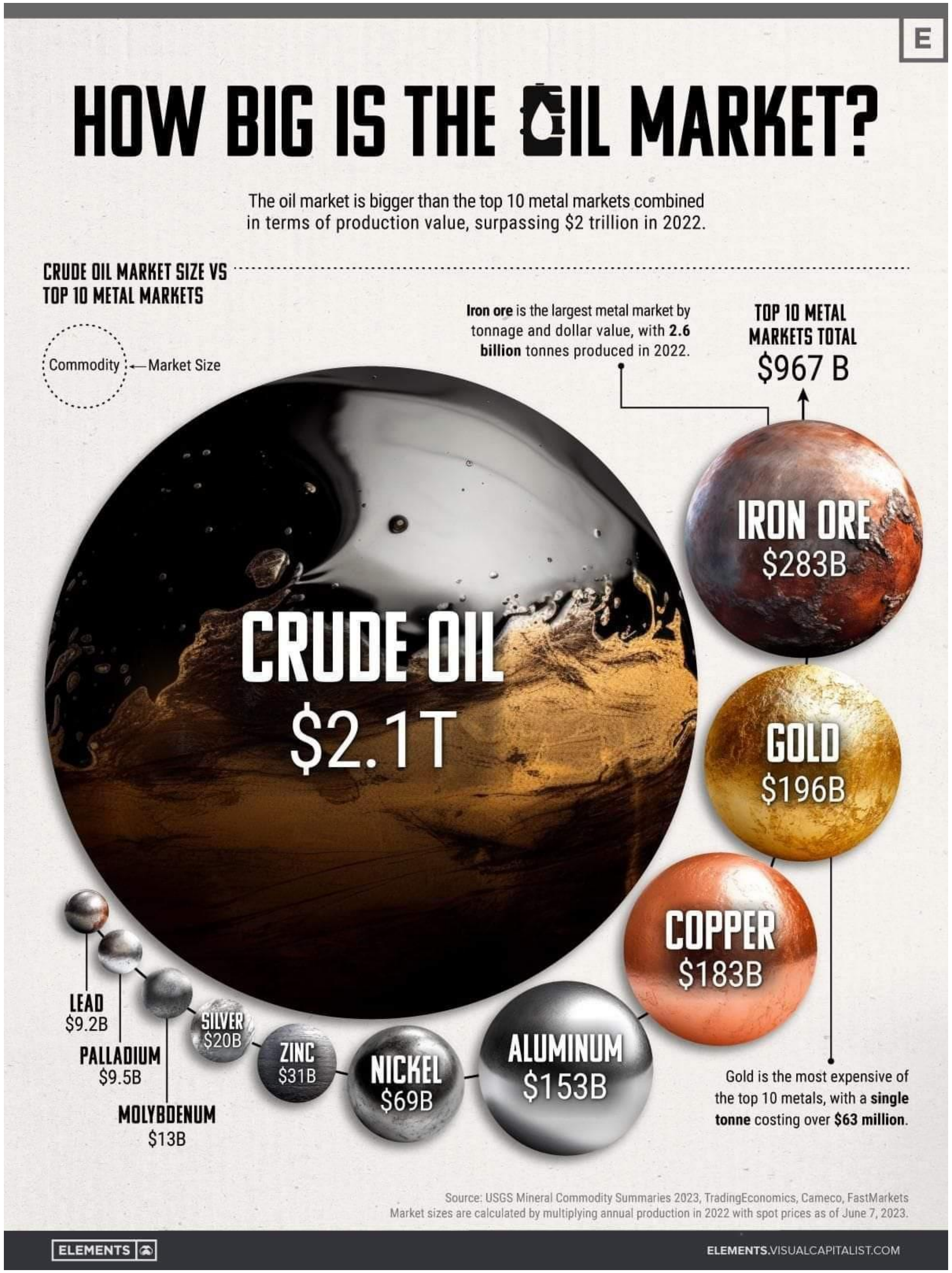

*Inter-annual variation of drought for the period 1951-2013 reflecting drought patterns. (W = wet, L = low, D = dry)*

**Winter rainfall areas**
particularly hard hit

This means that the current **response via demand-side management** is inappropriate because there has been a **fundamental shift in supply**.



SOUTH AFRICA'S WATER RESOURCES BY NUMBERS
8%
OF SOUTH AFRICA'S LAND AREA
PROVIDES 50% OF OUR RUN-OFF
THIS 8% FORMS OUR WATER SOURCE AREAS
21%
OF SOUTH AFRICA RECEIVES LESS THAN
<200MM
OF RAIN A YEAR
9%
OF RAINFALL ENDS UP AS RUN-OFF IN OUR RIVERS
4% RECHARGES OUR AQUIFERS
1998
NATIONAL WATER ACT
GIVES THE ENVIRONMENT A RIGHT TO WATER WITHIN THE RESERVE
NO-ONE OWNS WATER RESOURCES IN RSA
490mm
SOUTH AFRICA'S AVERAGE ANNUAL RAINFALL
814mm
THE WORLD'S AVERAGE ANNUAL RAINFALL
1800mm
OUR AVERAGE RATE OF POTENTIAL EVAPORATION IS MORE THAN 3 TIMES THE RAINFALL
49 BILLION M³ SURFACE RUNOFF
AVERAGE ANNUAL RUNOFF. ONLY 30% CAN BE ALLOCATED AT A HIGH ASSURANCE OF SUPPLY
98%
ALREADY ALLOCATED TO USERS AT A HIGH ASSURANCE OF SUPPLY
2%
REMAINING UNALLOCATED, USABLE RESOURCE
37% OF WATER
IS LOST IN THE CURRENT URBAN INFRASTRUCTURE
15 Billion m³
IS THE CURRENT ALLOCATION
2016
17.7 Billion m³
IS THE ESTIMATED DEMAND REACHED BY 2030
2030
THIS IS BEYOND THE LIMIT OF WHAT WE CAN SAFELY ALLOCATE




Oil @ 5 billion m³ per annum & USD2,1 trillion
or R10 000 per m³

Water @ 4 trillion m³ per annum & USD2,0 billion
or R10-00 per m³

NB: 1 trillion = 1 000 billion

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