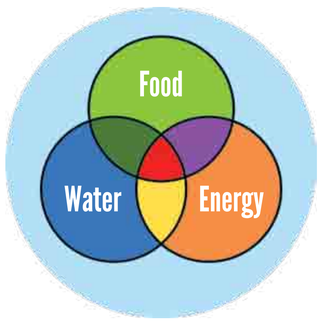
ETHEKWINI MUNICIPALITY
WATER AND SANITATION

FOOD WATER nexus ENERGY CLIMATE



CONCEPT

1990 — International City

1992 — Rio (Brazil) — United Nations Conference on Environment and Development (UNCED)
- Sustainable Development
- Agenda 21

1995 — SA Constitution — Introduced - basic water and clean environment (sanitation) – but not free

1996 — Metro Water Services — Creation of a metro-wide water services unit

1996 — Roof tanks — Roof tanks introduced to provide buffer storage during periods of high water demand at a lower water tariff

1997 — Free basic water — City introduced free basic water to indigent

2000 — Sanitation added to EWS — Sanitation services combined with water services

2000 — National Free basic water — National government introduced free basic water to indigent citizens following the example provided by the eThekwini Municipality

2000 — Durban Water Recycling — Opening of the Durban Water Recycling Plant to relieve the pressure on the potable water resources of the city by providing an industrial grade water

2002 — Rio + 10 (Johannesburg, South Africa) — World Summit on Sustainable Development (WSSD)
- Johannesburg declaration on Sustainable Development
- Millennium Development Goals

2002 — Cholera — National outbreak of cholera with local cases in the centre of the city causing a dramatic recognition of the importance of the roll-out of free sanitation services

2003 — Agritube/ grey water — Agritubes and other methods to adsorb grey water in informal settlements so as to prevent diffuse pollution

2005 — Free basic sanitation (UD) — Recognising the looming challenge in emptying VIP pits, free basic sanitation in the form of urine diverting toilets start being rolled out in rural areas.

2006 — VIP emptying — The VIP toilets installed 10 to 15 years previously are starting to become full necessitating their emptying and safe disposal

2008 — Mariannhill Landfill gas — Electricity is being generated from landfill gas. The Mariannhill plant (1.0 MW) is commissioned

2008 — Energy office — The City Energy Office is created to reduce the dependence of the city on non renewable resources.

2008 — KZN Coastal Metropolitan Areas – Water Reconciliation Study — The long-term evaluation of the water resources for the coastal towns in KZN indicated that a shortage was looming and new sources of supply were needed

2008 — Buffelsdraai Landfill site Community Reforestation Programme — A reforestation project to sequester 300 Mt of CO2 equivalent in an area of 284 ha as part of the 2010 FIFA World Cup

2009 — City Hall cabbages — Mayor initiates the local production food by growing vegetables in the City Hall gardens

2009 — Agriculture Management Unit — Agricultural Management Unit initiated to provide resources and technical advice to novice horticulturalists interested in initiating food gardens

2009 — Rural irrigation using maturation pond effluent — Demonstration project setting up a cooperative to grow crops using the treated water from a maturation pond sewage disposal system at Magabheni

2010 — Biodiesel from Microalgae — Demonstration plant commissioned to evaluate the production and processing of algae for biodiesel.

2010 — LaDePa — A plant for the pelletisation and pasteurisation of VIP sludge is developed by engineers at EWS.

2010 — Bisasar Rd Landfill gas — Second plant for the generation of electricity (6.5 MW) from Landfill gas is commissioned.

2010 — DEWATS plant at Newlands Mashu — Construction of a decentralised wastewater treatment plant using anaerobic digestion to provide water and nutrients for agriculture

2010 — Codigestion of high-strength organic effluents in municipal anaerobic digesters — Demonstration and design system to promote the segregation of high-strength industrial effluent streams at source for disposal in municipal digesters.

2010 — Aquaponics — Commissioning of a fish hatchery to produce 2.0 mil fingerlings per year for stocking aquaponics ponds and dams for use as a human protein source.

2010 — Community Gardens — Provision of technical and social support to 100 farm groups in rural areas within the municipality.

2011 — Vuna – Nutrients from urine — Initiated research on the collection and processing of urine from UD toilets for so as to enable the use of the nutrients in urban agriculture

2011 — Rainwater harvesting — The installation of 3 600 rainwater harvesting tanks in rural houses and schools to supply water to food gardens

2011 — Bonn Nexus

2011 — COP 17 (Durban)

2012 — 17 th Session of the Conference of Parties (COP17) to the United Nations Framework Convention on Climate Change (UNFCCC) (Durban) — International meeting held in Durban

2012 — UN Declaration water and sanitation

2013 — uMngeni Ecological Infrastructure Programme — Integrated approach to utilise environmental goods and services for the preservation of the water resources feeding the region.

Sustainable Development • MDG, SDGs