

Interactive Session

ADAPTATION



D • APPOLONIA

consulting, design, operation & maintenance engineering

The Need

VALORISATION OF THE WATER RESOURCE

WATER IS AN IMPORTANT NATURAL RESOURCE AND IS CRITICAL FOR SUSTAINABLE DEVELOPMENT OF PRACTICALLY ALL SOCIAL AND ECONOMIC SECTORS AS IT IS REQUIRED FOR DOMESTIC PURPOSES, AGRICULTURAL AND INDUSTRIAL DEVELOPMENT, ENERGY GENERATION AND LIVESTOCK AND TOURISM DEVELOPMENT.

Risk

IT IS VULNERABLE TO THE RAINFALL VARIABILITY AND THE GROWING POPULATION AND TO THE ASSOCIATED INCREASED DEMAND AND POLLUTION



The Need

OTHER RISKS

WARMING ASSOCIATED WITH CLIMATE CHANGE ACCELERATES THE RATE OF SURFACE DRYING (CONSEQUENCES ARE LESS WATER MOVING IN NEAR-SURFACE LAYERS OF SOIL, REDUCED DOWNWARD MOVEMENT OF WATER AND LESS REPLENISHMENT OF GROUNDWATER SUPPLIES).

CLIMATE CHANGE WILL ALSO AFFECT WATER QUALITY WITH IMPACT ON HUMAN HEALTH.



The Need

OUR EXAMPLE

LET'S CONSIDER KENYA, A COUNTRY WHERE WATER AVAILABILITY IS LOW AND THE DEMAND FOR RENEWABLE FRESHWATER EXCEEDS SUPPLY.

THUS, IT CAN BE CLASSIFIED AS A WATER SCARCE COUNTRY.

THE TREND FOR THE FUTURE REFLECTS THE MENTIONED CRITICALITIES AND RISKS.



The Need

THE MAIN NEED FOR THIS TYPE OF COUNTRIES IS TO ENHANCE MANAGEMENT OF THE WATER RESOURCE AND THE DELIVERY OF QUALITY SERVICES TO THE CITIZENS, GROUNDWATER ABSTRACTION, RAINWATER HARVESTING AND BUILDING OF WATER STORAGE CAPACITIES.

WHAT ARE IN YOUR OPINION THE MOST SUITABLE TECHNOLOGIES THAT CAN ADDRESS AND POTENTIALLY SOLVE THE NEED EXPRESSED BEFORE?



The technologies

POTENTIALLY SUITABLE TECHNOLOGIES; THEY CAN BE AN ANSWER TO THE NEED EXPRESSED BEFORE

Water Aerobic digestion

Waste water treatment plant including phytodepuration systems

Grey water reuse systems including a treatment system, tank and distribution pipe

Household Drinking Water Treatment and Safe Storage - Ceramic filters and biological sand filters

Household Drinking Water Treatment and Safe Storage - use of carbon block

Waterborne transportation of fresh water

Rainwater harvesting from rooftops

Rainwater collection from ground surfaces



The KPIs

KEY PERFORMANCE INDICATORS, AGAINST WHICH THE TECHNOLOGIES ARE EVALUATED

Carbon Emission reduction

Political & Regulatory Impact

Business & Economic Impact

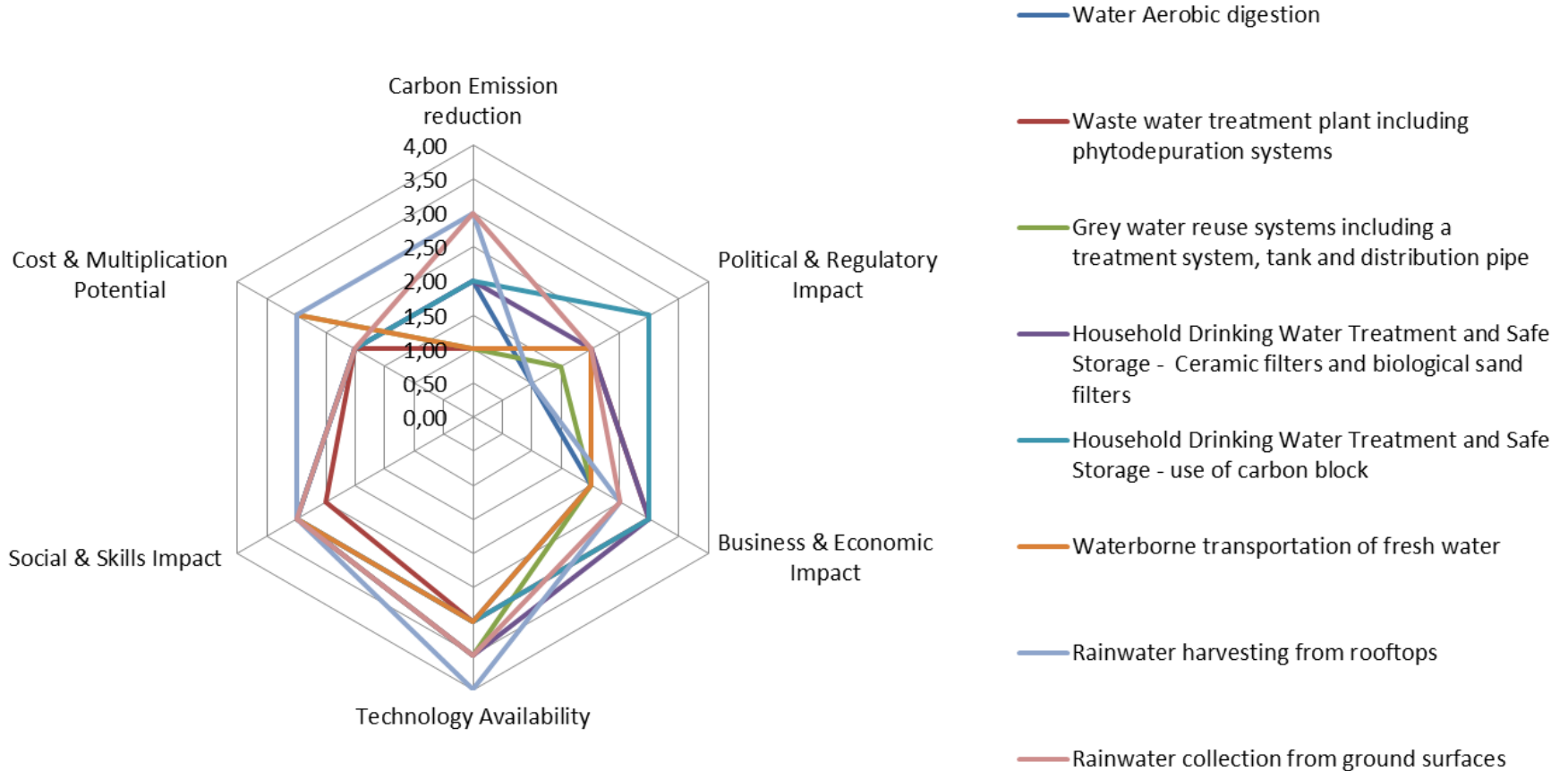
Technology Availability

Social & Skills Impact

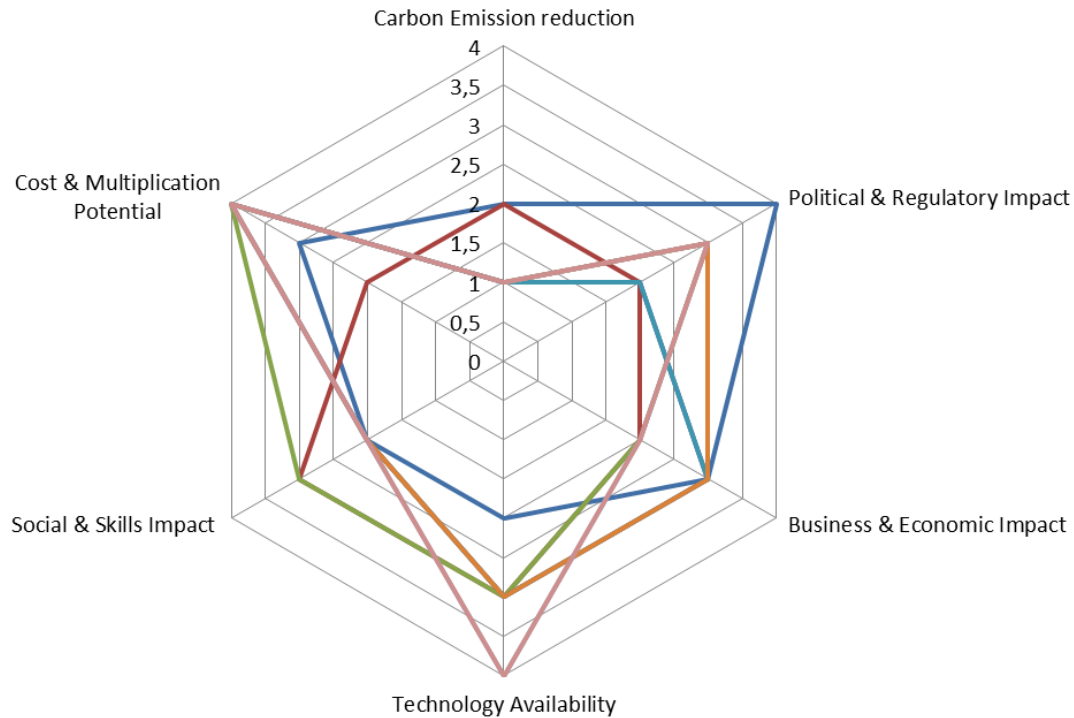
Cost & Multiplication Potential



Exercise results



The evaluation



- Water Aerobic digestion
- Waste water treatment plant including phytodepuration systems
- Grey water reuse systems including a treatment system, tank and distribution pipe
- Household Drinking Water Treatment and Safe Storage - Ceramic filters and biological sand filters
- Household Drinking Water Treatment and Safe Storage - Use of carbon block
- Waterborne transportation of fresh water
- Rainwater harvesting from rooftops
- Rainwater collection from ground surfaces including below ground tanks where rainwater is conveyed from earth catchment areas.

