



*Food Security is at the  
Centre of our Strategy*

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*Food Security*

Environment  
& Beyond



SOIL  
ENHANCEMENT

FISH &  
CRUSTACEAN  
IMPROVEMENT

CATTLE  
IMPROVEMENT

IMPROVED  
FARMING

**Z<sub>2</sub>O Limited**  
Has firmly put  
Environmental  
biotechnology at the service  
of food security. All the  
departments come together  
to secure better availability  
and accessibility to food for  
Billions

IMPROVED DAIRY  
PRODUCTION

ALTERNATIVE  
SOURCE FOR  
BIO-FUELS

BETTER  
RESOURCES  
MANAGEMENT

FEEDSTOCK FOR  
BIO-FUELS

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# FOOD SECURITY . . . How do we contribute

## Our products

Every one of our products has a contribution to food security. They will make food more available and more accessible.

1. **Biorismus E&W™** will bio-remediate soils and water contaminated with hydrocarbons and other contaminants reclaiming them for use as agricultural arable land. This includes drilling mud cuttings and tailings in tar sands operations.
2. **Aquarius E&W™** will eliminate waste in water and prevent further contamination of the water resources. When Combined with **Probius C&F™** in cattle and fish feeds it will improve their health and increase the yields by 30 to 50%. **Nitrus™** is added to fish or crustaceans feeds which has decreased post larval mortality from over 95% to below 5%. Finally bacteria in **AquaLactus™** will supply the natural antibiotic precursors that will eliminate vibrio and micobacteria, major contributors to post larval mortality increasing food quality and quantity.
3. **GeoHumus™** will break down the contaminants in the soil and will reclaim this valuable resource back to agriculture, increasing the yields by up to 50%. Combined with the water from farm animal waste treated with **Capitalus™** will result in a healthier organic soil and higher yields.

## Our products

4. **Prodigus S&W™** will treat industrial and municipal wastewater allowing its recycling for indefinite re-use as irrigation water, and reducing the water requirement. In addition 90% of cellulosic waste produced by industries goes to waste and is not re-used.
5. **Magnus P&W™** breaks down the long chains of cellulose into sugar molecules that can be fermented to produce high quality bio-fuels. The product will eliminate the dependence on food commodities for the production of bio-fuels.
6. **Nautilus E&P™** is the product that probably contributes most. It will recover over 50% of the proven reserves of oil unrecoverable with currently available technologies. It will simplify the oil extraction from tar sands, reducing exploration activities, and the environmental damage to soil and water from Oil & Gas activities.
7. **Z<sub>2</sub>O** products will increase supply to meet the growing demand of growing populations.

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# FOOD SECURITY ... Our impact

## How do we impact

One of the most prominent worries of Governments and International Organizations around the world, is food security: It is not only securing enough food supplies, but more importantly accessibility to those supplies.

Food security is one of three areas where Z<sub>2</sub>O is actively involved. Food security is at the centre of our strategy for growth. At the heart of this strategy lie the development of our Energy and Food products.

Our strategy is multidirectional and addresses the growth in supplies and accessibility of food as well as the reduction in demand the demand factors:

### **The impact of our products on the supply and demand factors:**

1. They will repair depleted arable land, by restoring the health of the soil. They will further increase the yields produced by the available arable land increasing the food supplies without increasing the demand on arable land.
2. They will restore contaminated land to arable land increasing the supply and reducing the demand on arable land.
3. They will minimize the contamination of arable land and ground water tables.

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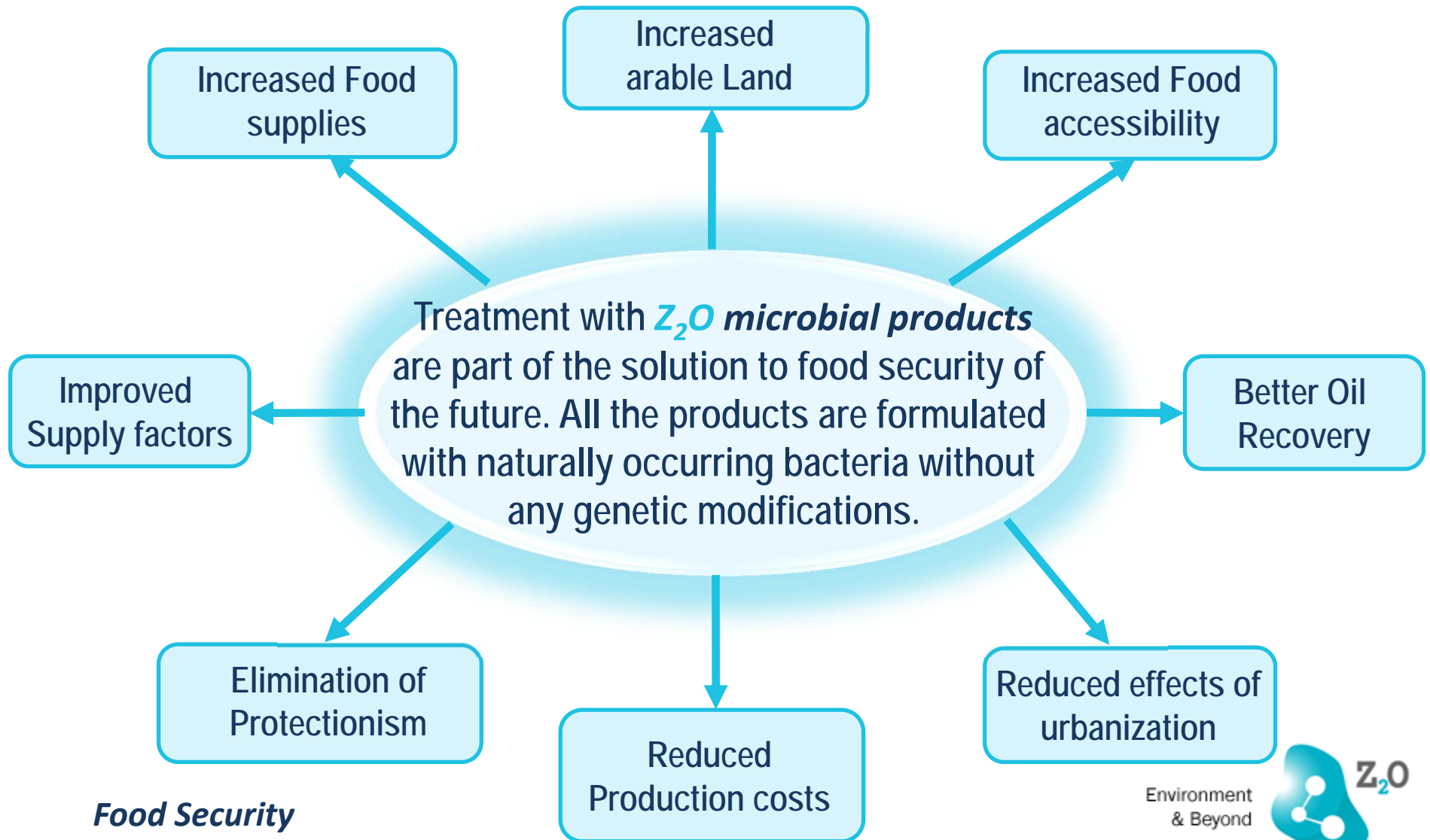
## How do we impact

4. They will improve the quality of water in irrigation and optimize the quantities required increasing further the productivity of the land. They will recycle the used water for re-use indefinitely.
5. They will improve yields on agricultural product 35 to 50% increasing the supplies without increasing the demand on arable land.
6. They will improve the health and yields of cattle and fish products by up to 35% increasing the quantities of available food without increasing the demand on numbers and space.
7. They will reduce the demand on food commodities as feedstock to produce bio-fuels, thus reducing the demand on fossil fuels.
8. They will enhance by up to 50% the Oil & Gas recovered from unrecoverable proven reserves and hence will reduce the demand on new land for exploration, and the ecological impact of the Oil & Gas activities.

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# FOOD SECURITY ... The impact



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# FOOD SECURITY ... Assessment

<i>Action</i>	<i>Impact</i>
Arable Land Stimulation	Less demand on Arable Land
Land, Soil & Water Bioremediation	More supply of Arable Land and Water
Improve soil quality	Better Yields and more food accessibility
Improve Water Management	More irrigation water available
Improve water and animal feed quality	Better yields, more food, better income
Better Waste management	Less urbanization effects
Breakdown of cellulose for feedstock for Bio-Fuels	Reduce Demand on Food commodities as feedstock for Bio-Fuels
Improve production ratios in Oil reservoirs and Tar Sand Mines	<ul style="list-style-type: none"> <li>- Less demand on property for exploration</li> <li>- Less Environmental Impact.</li> <li>- More Property for Agriculture.</li> </ul>



# About

## *The Environmental Biotechnology Company*

Z<sub>2</sub>O discovers, develops and formulates natural microbial products to improve performance in many industries globally. We have a proven track record of creating and delivering transformational value through focused development in three thematic disciplines: Energy, Food, and food security.

Our Technology is unique in that it combines groups of naturally occurring bacteria that work together to help nature restore the balance lost with intensive human activities and their impact on the environment.

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# Z<sub>2</sub>O Limited -*Contact Us*

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