

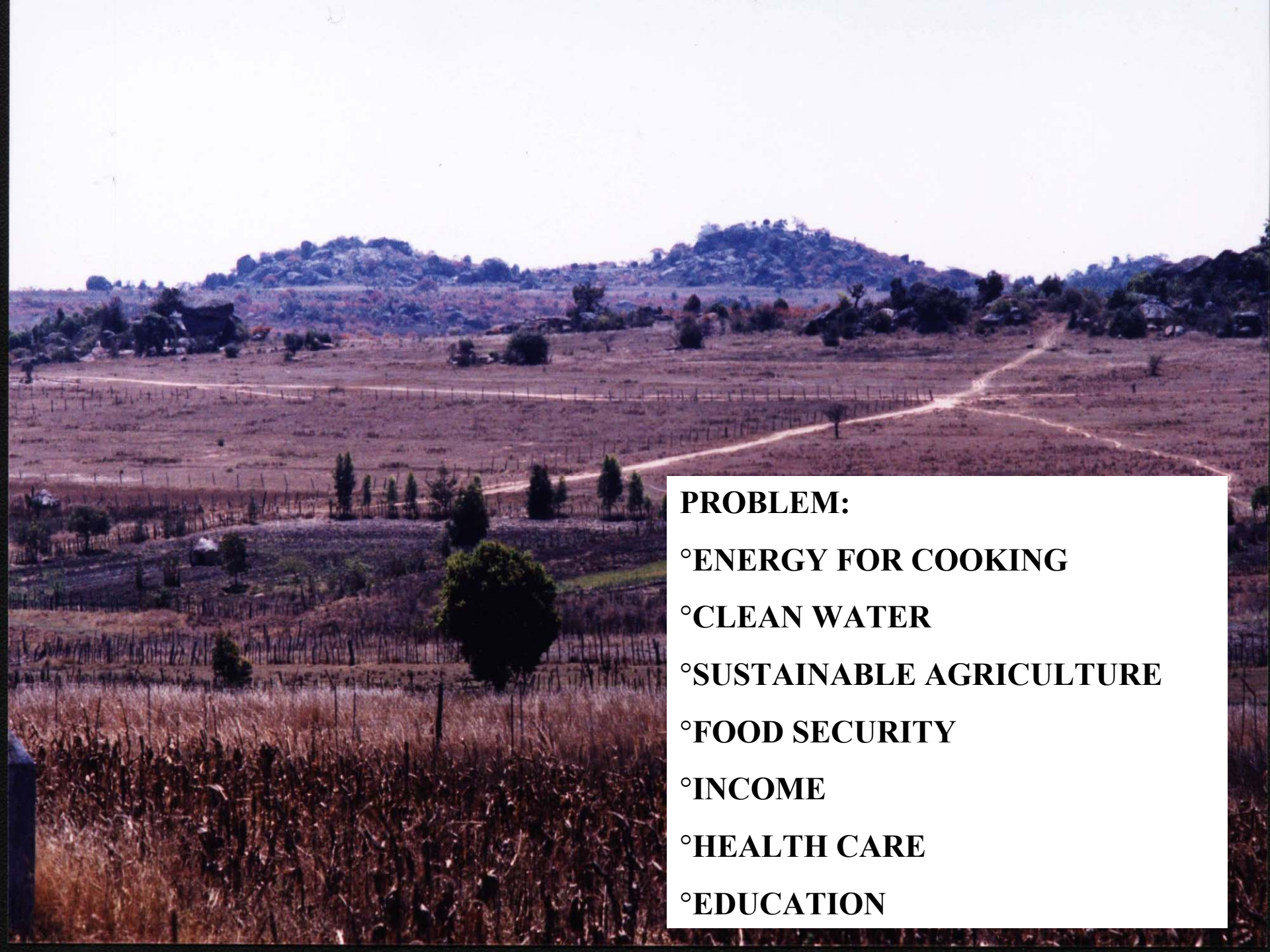


WIND POWER FOR A BRIGHTER FUTURE

ZIMBAWE CASE STUDY

N NZIRAMASANGA

SOUTHERN CENTRE FOR ENERGY AND ENVIRONMENT



PROBLEM:

° **ENERGY FOR COOKING**

° **CLEAN WATER**

° **SUSTAINABLE AGRICULTURE**

° **FOOD SECURITY**

° **INCOME**

° **HEALTH CARE**

° **EDUCATION**



DISTANCE TRAVELLED TO FETCH WATER - DRY YEAR

| Distance (km) | % Chiweshe Area | % Zviyambe Area |
|----------------------|------------------------|------------------------|
| 0- .5 | 21 | 12 |
| .5 –1 | 9 | 9 |
| 1-2 | 13 | 15 |
| 2-4 | 16 | 11 |
| 4-8 | 25 | 28 |
| 8-32 | 17 | 26 |

Source: The Save Study, B.M. Campbell et al.



PREVIOUS EXPERIENCE WITH WIND:

° **LOW SPEED LARGE DIAMETER MACHINES**

° **WATER PUMPING ONLY**

° **HIGH MAINTENANCE**

° **HEAVY**

° **EXPENSIVE**

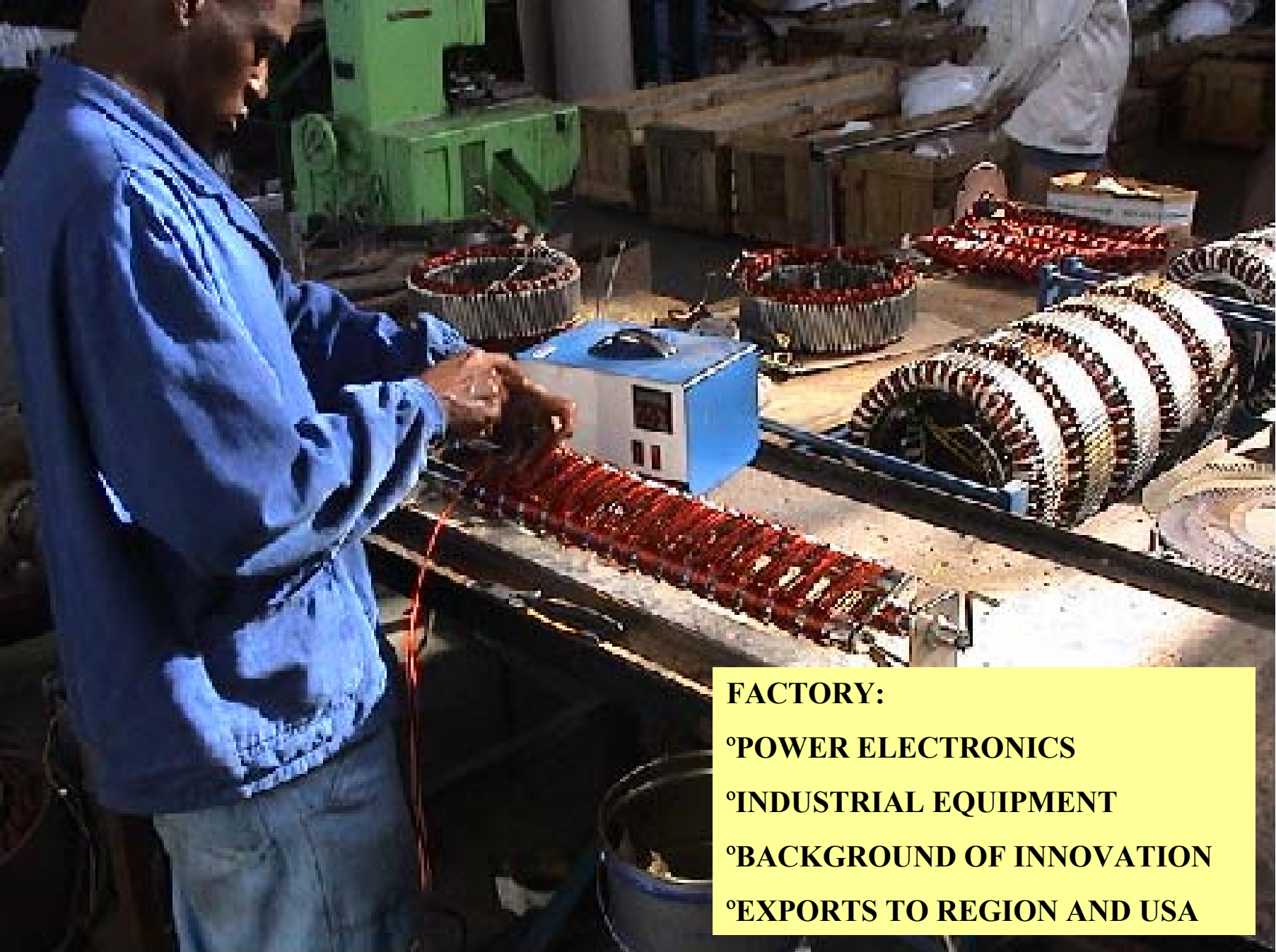
° **NOT VERSATILE**

° **HOWEVER ROBUST**



TECHNOLOGY TRANSFER:

- °ADAPTED EXISTING MACHINE TO LOCAL CONDITIONS
- °TRANSFERRED PRODUCTION SKILLS
- °TRAINED LOCAL TEAM
- °PARTNERED WITH EXISTING FACTORY
- °BENEFITTED FROM LOCAL INNOVATION



FACTORY:
°POWER ELECTRONICS
°INDUSTRIAL EQUIPMENT
°BACKGROUND OF INNOVATION
°EXPORTS TO REGION AND USA

3.6 kW Wind Electric Machine

Made by Africa Wind Power

**Designed in Collaboration with
Scoraig and Manx Energy**

**6 Machines Installed at
Tamaruru**

**Community Coordination by
ZERO a Regional Organisation.**

Tariff Based on Appliance

**Currently Lighting and Radio
only**

**Potential for Water Pumping and
refrigeration**





WHAT HAPPENS WHEN THE GRID COMES?

OPTION 1:

DECOMMISSION AND MOVE?

OPTION 2:

**MAINTAIN AS COMMUNITY ENERGY
PROJECT AND EXPORT TO GRID?**