

## **Using EZPack Bladders for Rain Harvesting in Africa**

### **Introduction**

African countries suffering or facing water shortages as a result of climate change have a massive potential in rainwater harvesting, with nations like Ethiopia and Kenya capable of meeting the needs of six to seven times their current populations, according to a United Nations report released today<sup>1</sup>.

Overall the quantity of rain falling across the continent is equivalent to the needs of 9 billion people, one and half times the current global population. About a third of Africa is deemed suitable for rainwater harvesting if a threshold of 200 millimeters of arrival rainfall, considered to be at the lower end of the scale, is used.

Although not all rainfall can or should be harvested for drinking and agricultural uses, with over a third needed to sustain the wider environment including forests, grasslands and healthy river flows, the harvesting potential is still much more than adequate to meet a significant slice of human needs, the report notes.

Until recently the importance of such harvesting as a buffer against climate-linked extreme weather has been almost invisible in water planning with countries relying almost exclusively on rivers and underground supplies, the report notes.

Unlike big dams, which collect and store water over large areas, small-scale rainwater harvesting projects lose less water to evaporation because the rain or run-off is collected locally and can be stored in a variety of ways.

The report mapped the rainwater harvesting potential of nine countries in Africa –Botswana, Ethiopia, Kenya, Malawi, Mozambique, Uganda, Tanzania, Zambia, and Zimbabwe.

Kenya, with a population of somewhere under 40 million people, has enough rainfall to supply the needs of six to seven times its current population, according to the study. Ethiopia, where just over a fifth of the population is covered by domestic water supply and an estimated 46 per cent of the population suffer hunger, has a potential rainwater harvest equivalent to the needs of over 520 million people.

### **EZPack Rain-Harvesting Solution**

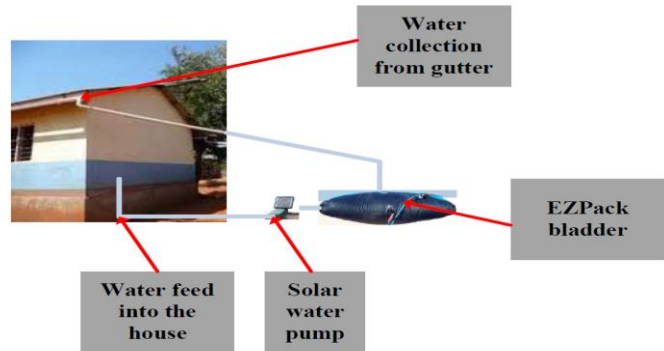
EZPack is offering a system for rainwater harvesting based in EZPack proprietary 2 layers bladders.

EZPack Rainwater Harvesting System (ERHS) can be used for home as well as for agriculture, with various water storage capabilities.

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<sup>1</sup> Rainwater harvesting could end much of Africa's water shortage, UN reports, 13 November 2006

The following chart outlines the layout of such system for a house or hut.



The collection system can fit any roof or gutter, and using standard piping deliver the harvested water to the bladder.

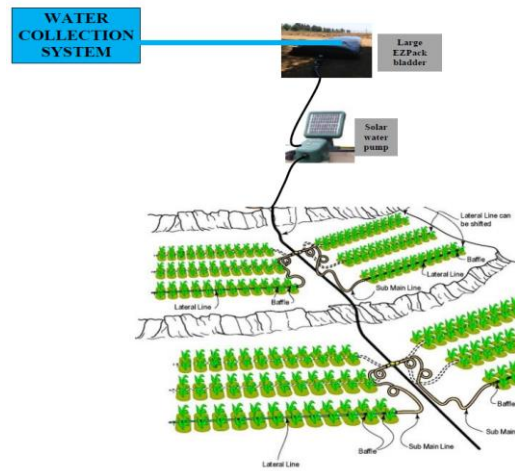
EZPack proprietary bladders has 2 layers: the outer layer is made of rigid PVC material that sustain sun and harsh terrain. The inner insert is made of food-graded materials and it is where the water are stored. The EZPack bladder is the ultimate solution for healthy water; no maintenance! No cleaning!

The gutter or the rain collection system connects to the bladder, which stores the water. The solar water pump, ensure water supply and pressure, operating on solar energy.

The water storage capacity of the bladder for house applications is 500 to 5000 liters.

For storing large quantities of water and for agriculture applications the system will built on larger storage capacity. EZPack has bladders of up to 20,000 liters. By stacking several bladders, there is no limitation to the volume of water that can be stored.

Following is atypical system layout for home agriculture dripping system application.



EZPack also provides light aluminum stage, for delivering the water from the bladder by gravity, without need to any energy.

