

•“I believe Gods Provision is here on the Earth. Men, women and children suffer needlessly because they don’t understand how to benefit from what has already been provided.”

*Phil Reasons*





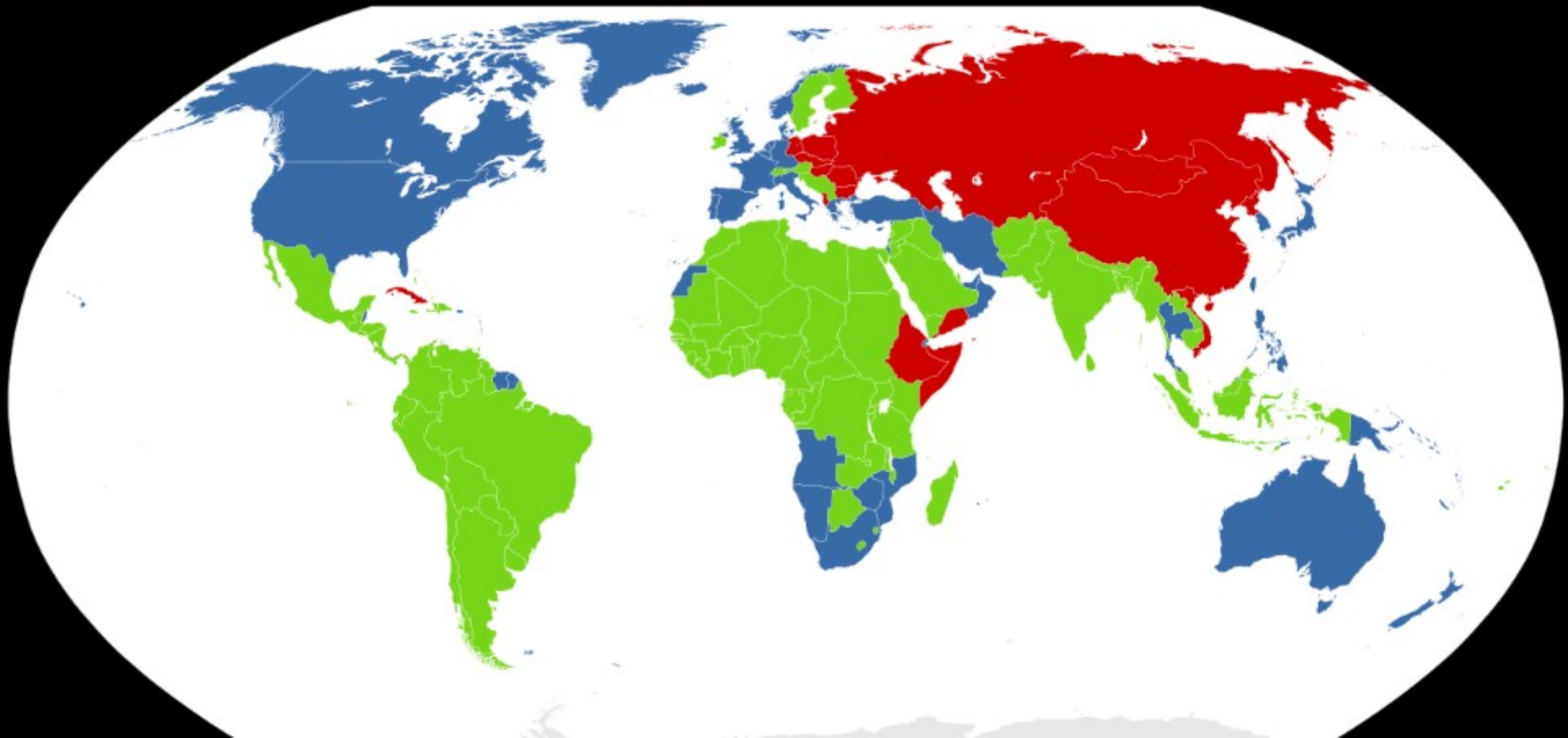


# **Can Aquaponics Change The Developing World**

# We must First Answer Three Questions

1. What is the Developing World?
2. What Change do we expect?
3. What is Aquaponics?

# 1. What is the Developing World



The "three worlds" of the Cold War era,  
1st World: Western Bloc led by the USA and its allies.  
2nd World: Eastern Bloc led by the USSR, China, and their allies.  
3rd World: Non-Aligned and neutral countries. Commonly referenced as Developing Countries after 1991  
A more modern reference is **Low Middle Income Countries (LMIC)**

# India: Developing Country (LMIC)









# Panama: Developing Country (LMIC)







# Nigeria: Developing Country (LMIC)









Obviously Most Developing Countries  
Have some very Developed Areas



For this discussion I want to focus on the  
Rural Poor



## 2. What Change do we expect

### Understanding the Economic and Nutritional Needs in the Developing World (LMIC)





# Economic Needs



More than 3 Billion people in the world  
Live on less than \$2.00 per day

# Nutritional Needs

A healthy diet includes the following:

Fruit, vegetables, legumes (e.g. lentils and beans), nuts and whole grains (e.g. unprocessed maize, millet, oats, wheat and brown rice).

At least 400 g (i.e. five portions) of fruit and vegetables per day, excluding potatoes, sweet potatoes, cassava and other starchy roots.

Less than 30% of total energy intake from fats (found in fish, avocado and nuts, and in sunflower, soybean, canola and olive oils) are preferable to saturated fats (found in fatty meat, butter, palm and coconut oil, cream, cheese, ghee and lard)



## ESSENTIAL NUTRITION ACTIONS

mainstreaming nutrition through the life-course



# 3. What is Aquaponics

aq·ua·pon·ics

a system of aquaculture in which the waste produced by farmed fish or other aquatic animals supplies nutrients for plants grown hydroponically, which in turn purify the water.

There are three primary aquaponic methods emerging in the industry;

# 1. Floating Raft (DWC)





## 2. Nutrient Film Technique (NFT)



### 3. Media-filled beds.







## Integrated Aquaculture

What is it?

How does it work?

Could this be the solution?





























































**Thank You!**

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