



“Agroecology *and its Sustainable Economic/Socio-* *environmental Technologies”*

*“Sustainable development under
conditions of global climate change”.*

(School seminar with exclusively didactic purposes)





GLOBAL CLIMATE CHANGE

"... the university exists only to help men transform deserts into gardens ...". Rubem Alves.

Sustainable development

Agroecology and its Sustainable Economic/Socio-environmental Technologies





GLOBAL CLIMATE CHANGE AND DISPLACEMENT



GLOBAL CLIMATE CHANGE AND REFUGEES



GLOBAL CLIMATE CHANGE AND DEFORESTATION AND DROUGHT



AGROECOLOGY



*"Sustainable Economic/Socio-environmental
Technologies to Sustainable development"*



Economically viable,

Ecologically correct,

Socially just,

Culturally appropriate,

Technologically suitable,

Scientifically proven.

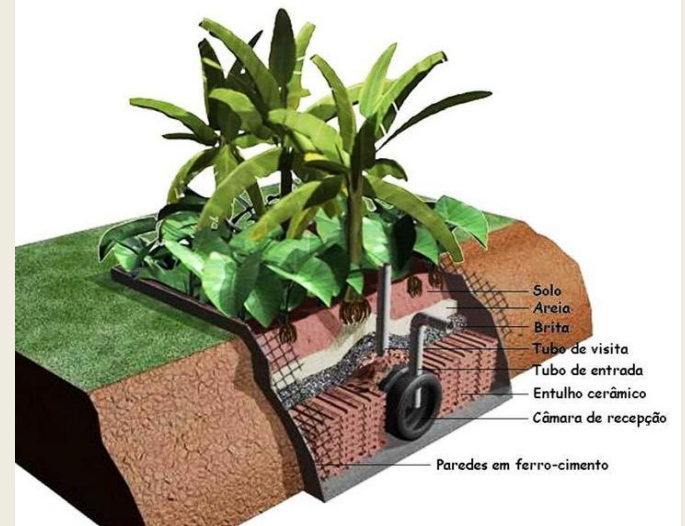




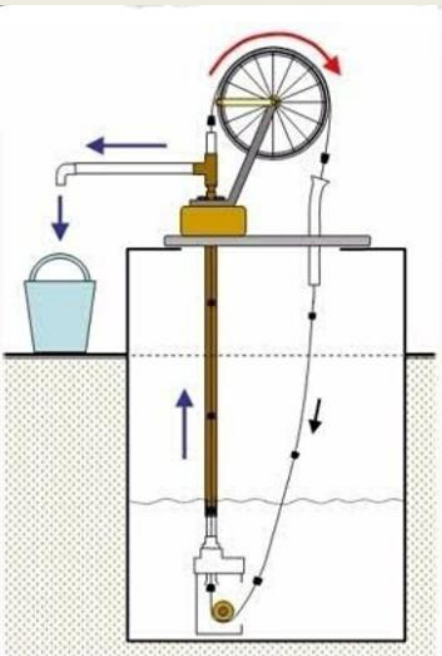
COMPOSTING



BIOFERTILIZER



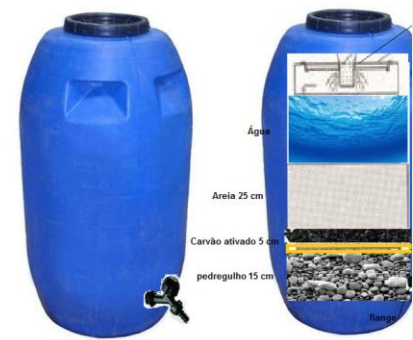
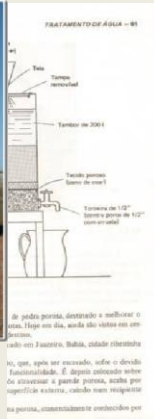
EVAPOTRANSPIRATION BASIN



HAND WATER PUMP



STORAGE SURPLUS



ECO WATER FILTER



ECO BRICK



PIG WASTE TREATMENT



WORM BREEDING



VERTICAL GARDEN



“I sustain that the sole purpose of science it is to relief the suffering of human existence”. B. Brecht.



NEAPE/DEA/UFLA

*(Center for Studies in Agroecology, Permaculture and Innovative University
Extension / Engineering Agricultural Department / Lavras Federal University / Brazil)*



Núcleo de Estudos em Agroecologia, Permacultura e Extensão Inovadora
Universidade Federal de Lavras



Economic and Sustainable Socio-environmental Technologies from Agroecology



- **01) Composting and Organic Fertilization: Development, production, application and management;**
- **02) Biofertilizers and Biopesticides: Development, production, application and management;**
- **03) Biological Control: Pests and diseases on crops and in the domestic environment;**
- **04) Septic Tank: Ecological treatment of human waste;**
- **05) Storage and Handling for small agricultural production;**
- **06) Domestic Pasteurization of the Milk;**
- **07) Agroforestry: Consortium on Agroforestry Systems;**
- **08) Energy Alternative: Food Dryer and Solar Water Heater. Biodigester;**
- **09) Rocket Stove: Higher heat output with less fuel burned;**
- **10) Alternative Recipes to Average People with products of family farming;**
- **11) Getting a Nutritious Meal from surplus vegetable production;**
- **12) Bread Production: technology with alternative flours;**
- **13) Agroecological Production of Honey.**

Economic and Sustainable Socio-environmental Technologies from Agroecology (continuation)



- **1-“Relevants Aspects on Irrigation and Water Resources”;**
- **2-“Associativism and Cooperativism ”;**
- **3-“Seeds Tecnology”;**
- **4-“Poultry Breeding. Development and Management on semi-intensive systems”;**
- **5-“Goat Breeding. Development and Management on semi-intensive systems”;**
- **6-“Rabbit Breeding. Development and Management on semi-intensive systems”;**
- **7-“Livestock Breeding. Development and Management on semi-intensive systems”;**
- **8-“Home Health Programs” - “Vaccines and Family Health ”;**
- **9-“Horticulture”;**
- **10-“Culinary Approaches to the Diet Nutritional Enrichment”;**



1) These donations are done by other countries to areas that have suffered natural accidental disasters or to war refugees, but they do not render any social development.

They are always periodic, unstable and insufficient.

2) If it does not generate employment nor income they create external dependency, which, when extended, belittles human dignity. (Remember: Honor and dignity are essential features of human personality anywhere worldwide).

3) Therefore, we conclude that the average people are grateful for external help, but they do not want to live depending on these international donations forever.

4) People want to have the right to their own self-determination, as they have always done. People want decent work and income to be able to buy their own food with their own resources.

5) If there is no decent work and income in your territory, then the following alternatives remain:

5.1) To remain forever in refugee camps;

5.2) Try to immigrate illegally to more developed countries;

5.3) To work in the production and traffic of drugs;

5.4) To join groups of terrorists, delinquents, assailants and bandits;

5.5) Suicide.





"Food Security Program"



**Food security program to be applied in schools,
with family farming products obtained in an
Agroecological way.**

***It is a program to combat general food insecurity,
offering nutritious food to children and that were
produced by family farming in an agroecological way.***

***It also contributes to the generation of worth jobs and
income in the communities themselves***



<A country can only be strong, powerful, independent and sovereign, if and only if it produces its own food and not rely on others to feed themselves> (Prof. Gilmar Tavares).



<Un pays ne peut être fort, puissant, indépendant, souverain, si et seulement s'il produit sa propre nourriture et ne pas dépendre d'autres pour se nourrir> (Prof. Gilmar Tavares).



****COVID-19: Act now to avert 'hunger catastrophe' for millions missing out on school meals (UN News/2020)*.**
<https://news.un.org/en/story/2020/04/1062812>

How the COVID-19 pandemic can contribute to the perpetuation of food crises worldwide (GRFC/2020)
<https://www.wfp.org/publications/2020-global-report-food-crises>

143 Million People Could Soon Be Displaced Because of Climate Change (World Bank/2020)
<https://time.com/5206716/world-bank-climate-change-internal-migration/>

Is Climate Change Causing More Wars? (YEARS/2020)
<https://theyearsproject.com/learn/news/is-climate-change-causing-more-wars/>

Deforestation and Global Warming (Wikipedia/2020)
https://en.wikipedia.org/wiki/Deforestation_and_global_warming/

***Without action to protect wildlife and preserve the environment, the zoonotic diseases which jump from animals to humans are increasing (BBC/2020)*.**
<https://www.bbc.com/news/health-53314432>



Finally, I would like to leave the following message for everyone



1) Socio-environmental problems such as: Hunger, misery, malnutrition, pollution, **global warming**, are definitely solved with **Science and Technology**;

2) **Universities** need to understand that everyone has **Social Responsibility** and that **science** exists to improve people's lives and environment's protection but not simply publish scientific papers;

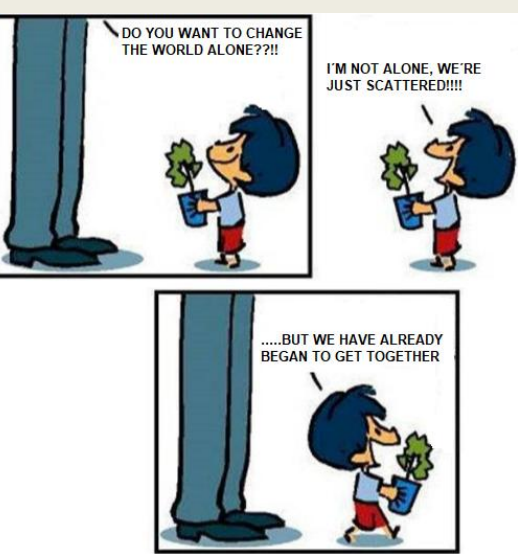
3) **Agroecology** is a viable way to achieve these objectives because it **join** popular knowledge with modern and advanced **science**

4) **Definitive peace** only with the production of **basic and fundamental foods** for all populations.

People need food !!

5) The displacement ending of the poor and miserable crowds and the end to **inhumane, cruel** refugee camps will only be possible with **food production**.

People need food !!



Je vous remercie

Gracias

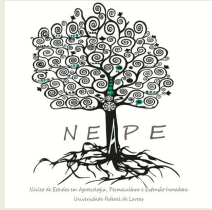
謝謝

אסיר תודה

Dankbar



ممتن



OBRIGADO!!!

(THANKS A LOT)



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