Comitato
per una Civiltà dell'Amore

"The conversion of nuclear weapons? It's worth it!"
Assisi, November 17, 2021

Micro-projects for sustainable development in poor countries

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A SIPRI report shows that the survival of mankind is threatened by over 13,400 nuclear warheads worldwide

(Source: SIPRI Report 15 June 2020 https://sipri.org/media/press-release/2020/nuclear-weapon-modernization-continues-outlook-arms-control-bleak-new-sipri-yearbook-out-now)

Picture tg24Sky https://tg24.sky.it/mondo/2019/09/26/armi-nucleari-mondo

But if we used a share of the resources generated by the dismantling of nuclear warheads what could we do?

Traditional rural House in Southern Ethiopia

Furthermore, Why not use a share of the aforementioned resources for so-called micro-projects?

Training on compost preparation with natural elements such as leaves, grass and manure, Ethiopia 2021

We know that we cannot give up on mega projects (large dams, highways, mega plants, etc.) but how much of these resources directly benefits rural populations? Are we aware that 80% of the third world population lives in rural areas, especially in Africa?

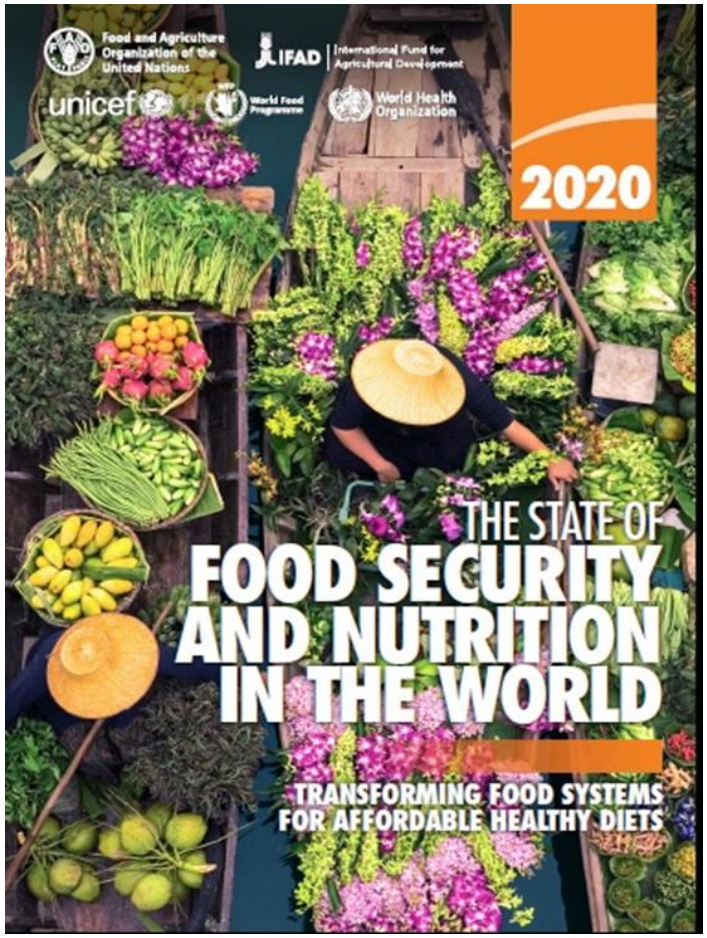
Picture: workers preparing a demonstration nursery for seeds

Caritas in Veritate, 47:

"Solutions need to be carefully designed to correspond to people's concrete lives, based on a prudential evaluation of each situation. **Alongside macro-projects, there is a place for micro-projects**, and above all there is need for the active mobilization of all the subjects of civil society, both juridical and physical persons"

https://www.vatican.va/content/benedict-xvi/en/encyclicals/documents/hf_ben-xvi_enc_20090629_caritas-in-veritate.html

According to the Report on global food security "The State of Food Security and Nutrition in the World" of 2020[1], in 2019 almost 690 million inhabitants of the planet suffered from hunger: 10 million units more than the previous year and nearly 60 million more than five years ago.
And things got worse with the COVID pandemic ...



1) https://sdgs.un.org/sites/default/files/publications/2704FAOpublication.pdf

Considering the total world population affected by food insecurity, it is estimated that **2 billion people worldwide did not have regular access to safe, nutritious and sufficient food** in 2019.
The world is not on track to achieve Zero Hunger by 2030.
If recent trends continue, the number of **people affected by hunger will exceed 840 million** by 2030.

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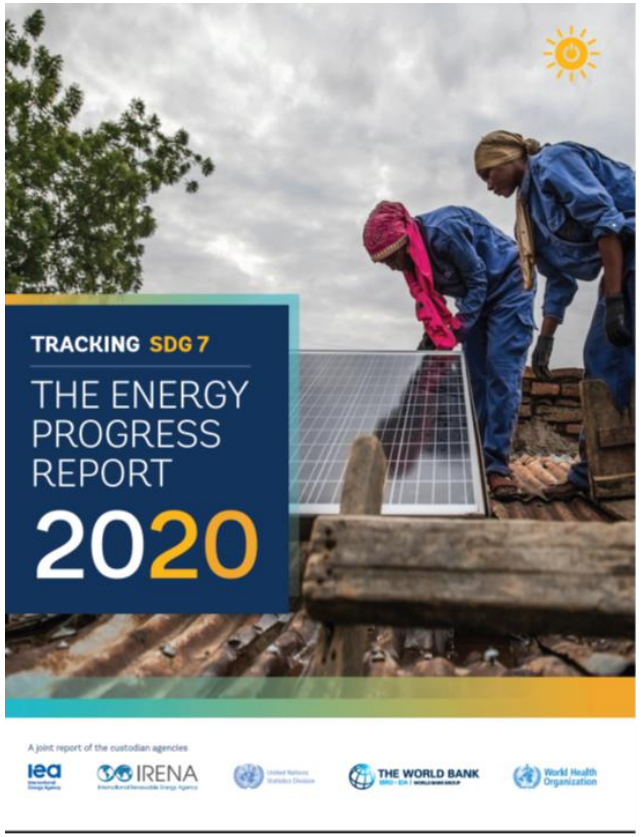
In other words, it is necessary to become more aware that the problem of hunger is not just a series of figures and statistics but above all concrete people who get sick and lose their lives, such as malnourished mothers who do not survive childbirth, children who are born deformed or however with little hope of life!

An image of the so-called "false banana", the enset, a plant similar to the banana tree except for the fact that it does not generate bananas, whose bark, transformed into a sort of crumb that can be seen in the photo, feeds on the rural populations in southern Ethiopia when they run out of food supplies.

Moreover, it is necessary to keep in mind the correlation between hunger and lack of access to energy and, in particular, to clean energy sources.
In the photo we see a traditional kerosene lamp used for night lighting in the villages of the rural hinterland of Ethiopia, where 80% of the population lives, whose smoke causes, especially to children, serious damage to the eyes, lungs and to the digestive system.

According to the 2020 report on the implementation of SDG 7, Energy Progress, it is estimated that 620 million people still would not have access to electricity in 2030, 85 percent of them in sub-Saharan Africa[1]



(1) cfr. https://www.worldbank.org/en/news/press-release/2020/05/28/covid-19-intensifies-the-urgency-to-expand-sustainable-energy-solutions-worldwide

Off-grid solutions are emerging as an important driver for access to rural electricity. Emerging evidence suggests that off-grid solar electricity reaches an estimated 141 million people in rural areas of the developing world, complementing grid electrification. Investments are not distributed equally and many developing countries are left out.

Solar panels installed in South Ethiopia for powering drip irrigation

The overall picture of the fight against hunger and the role of micro-projects has already been authoritatively outlined in other fora.
Here we would like to deepen some operational hypotheses of intervention in the field of micro-projects with concrete examples based on our experience

The center of a rural village in southern Ethiopia: on the right the Head of the Village office, on the left the agriculture Office

Our experience derives in particular from the "Employ" project, carried out by the Committee for a Civilization of Love with CEFA, which was its leader, and other partners, which involved 100 rural villages located in 5 Districts of the Wolaita area, in the Southern Nations, Nationalities and Peoples' Region (SNNPR), Ethiopia.

Training on Good Agricultural Practices in the framework of the "Empoly" Project

The project constituted a sort of aggregate of micro-projects that involved both individuals and local communities.
Among others, the main activity of the project was the technical training on Good Agricultural Practices**, which was attended by 47,000 farmers!**

Training on Good Agricultural Practices

The project also included:

- training on strengthening of cooperatives and market access.
- Support and advocacy actions with local institutions
- Training for the use of financial and micro-credit tools
- a Summer School in Italy
- The activation of a revolving fund to support cooperatives investments

During the "Employ" project it clearly emerged that one of the main limits to the development of more modern agriculture in the area is linked to the lack of water, which is not so much attributable to climatic or morphological factors as regards the absence of investments and training for systems of collection, saving and rational distribution of the available water.

An empty artificial water catchment basin in Southern Ethiopia

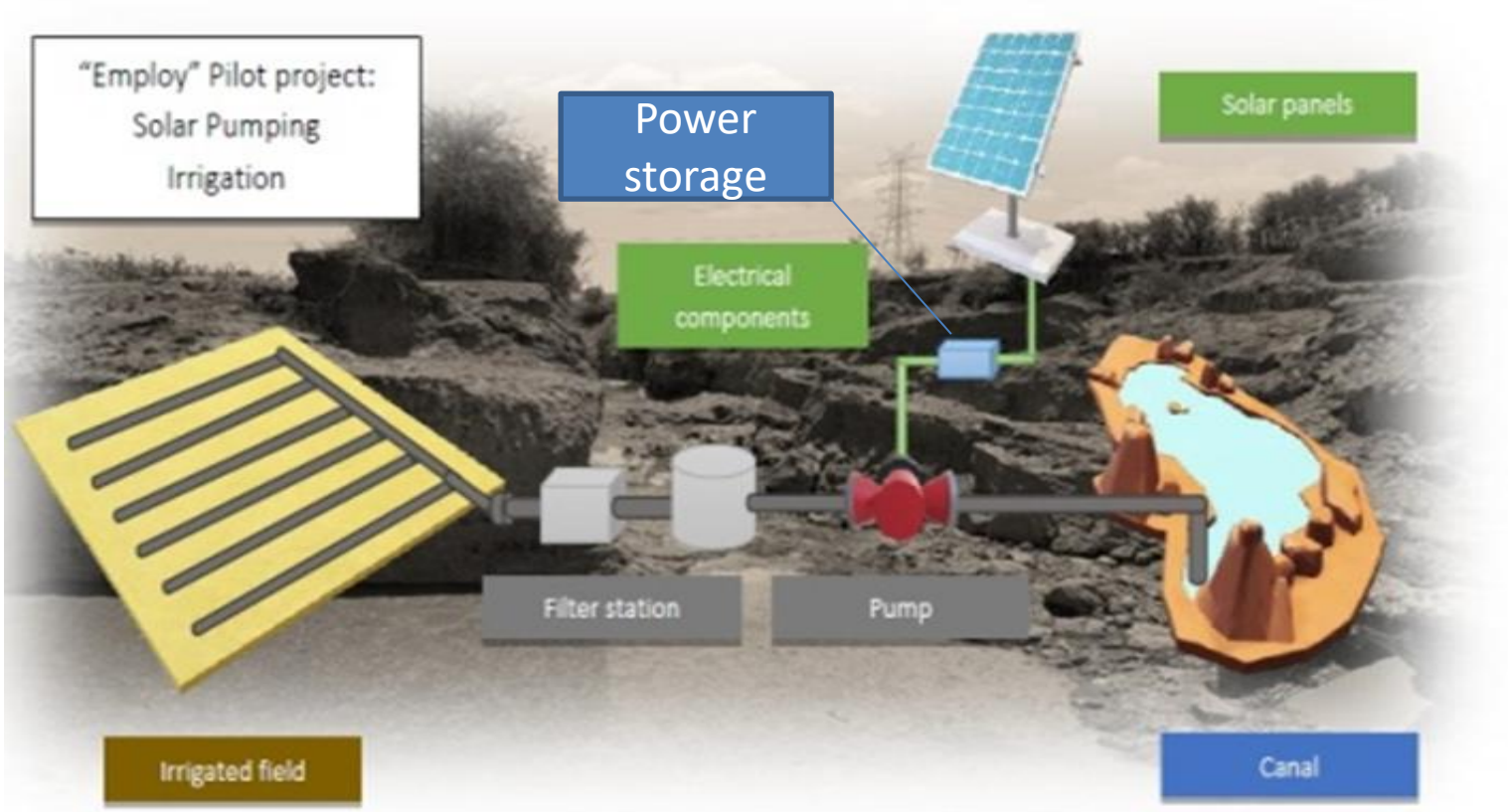
THE PROPOSAL

Based on our experience on the field, we have estimated that the creation of a relatively advanced farm, suitable for occupying a community of about 15 farmers and feeding their families, for a total of about 75 members, could cost about 129,000 euros of which:

Drip irrigation system powered by solar energy installed in Ampo Koysha, Wolayta, Southern Ethiopia

- **Drip irrigation system: 10,000 eur**
- **solar energy system: 65,000 eur**
- **Agro-zootechnical material (seeds, metal nets, wood, cement, fertilizers, tools, nurseries, etc.): 15,000 eur**
- **Transport and installation: 8,000 eur**
- **Training, staff, administration, etc.: 31,000 euros**

We could intervene according to the following scheme:



This means that**, with a cost of 8.5 million euros, about 67 farms could be built, feeding a village of 5,000 inhabitants,** which is the average size of the villages in Ethiopia. On a larger scale it means that **8,5 billion could feed 5 million people** sustainably, permanently and using renewable energy

But how to carry out these projects?

1. A gift?
2. On loan?
3. Or a mix?

According to our experience, **a mix** of these intervention methods would have the maximum effectiveness:

- the financial resources would have a **leverage effect** (revolving funds could be regenerated by loan payment installments)
- the educational impact: the final beneficiary farmers would not only receive goods and agricultural training but would also improve a real **entrepreneurial ability**!

For this we propose to intervene in **3 PHASES:**

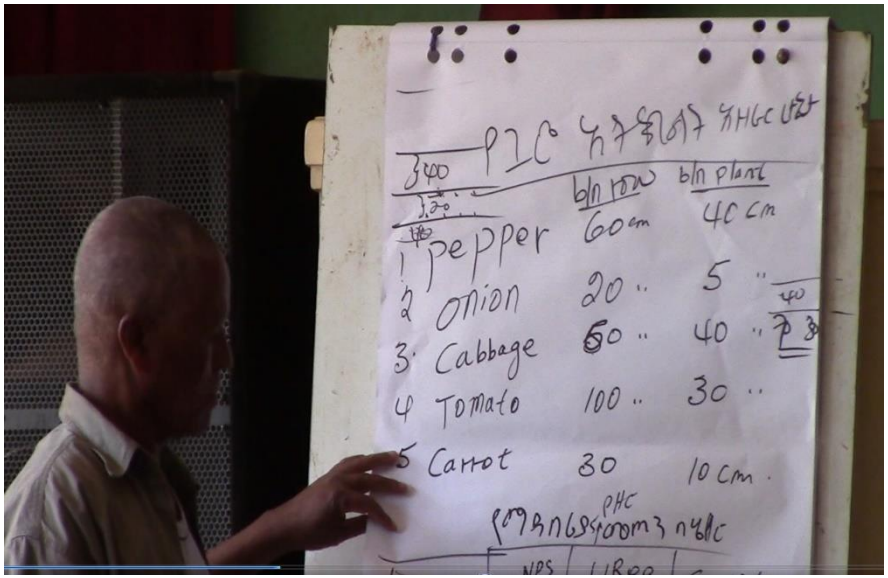
- Phase 1: for the construction of about **100 demonstration solar irrigation systems** donated in 2 years
- Phase 2 for the **construction of approximately 2,300 green farms** equipped with solar irrigation systems with an experimental micro-finance component
- Phase 3 for the **construction of up to 9,2 million farms** equipped with drip irrigation systems powered by solar energy with a proven micro-finance component

Phase 1:

- Creation of a Fund for a pilot project of approximately € **15 million euros (17 million dollars)**
- Duration of the pilot project **2 years**
- Creation of **100 demonstration irrigation systems powered by donated solar energy** in 100 different villages
- Number of **direct beneficiaries as employed: 1,700**
- Number of **indirect beneficiaries** (persons from the families of the employed): at least **8,700**

Phase 1 would serve to:

- **Test the most suitable materials** (panels, inverters, irrigation systems, etc.)
- Verify its actual productivity and quantify its **costs and benefits**
- Test the **training methodologies**
- Evaluate **the impact on local communities**, both in terms of living conditions and in terms of reaction to the introduction of new technologies but also new forms of aggregation for the organization of work



Training on Good Agricultural Practices and market access in Wolayta, Southern Ethiopia

Phase 2:

- Creation of a 2nd Phase Fund of approximately € **190 million euros (216 million dollars)** financing both revolving funds and grants to support the creation of new green farms
- **Duration of the 2nd Phase project 12 years**, starting after 2 years from the previous Phase
- **Creation of 2,300 green farms** with irrigation systems powered by solar energy **financed 30% by non-repayable grants** and 70% by soft loans to be repaid in 10 years, after a two-year grace period, at a subsidized rate
- Number of **direct beneficiaries** as employed farmers: **34,700**
- Number of **indirect beneficiaries** (persons from the families of the farmers): at least **173,000**

Phase 2 would serve to:

- verify the economic, social and environmental **sustainability of the farms** created and the ability of the communities that work there to deal with business planning and micro-finance tools
- verify the **functioning of the revolving funds** thus created before disseminating them on a global scale

Phase 3:

- Launch of a program of approximately **750 billion euros (about 860 billion dollars)** for financing both revolving funds and grants to support the creation of new green farms on a large scale
- Duration of the 3rd Phase: **12 years**, starting after 5 years from the beginning of Phase 1, and 3 years after the start of Phase 2
- Creation of **9.2 million green farms** with irrigation systems powered by solar energy **financed 30% by non-repayable grants** and 70% by soft loans, to be repaid in 10 years, after a two-year grace period, at a subsidized rate
- Number of direct beneficiaries as **employed: 138 million farmers**
- Number of indirect beneficiaries (persons from the families of the employed): about **690 million people**

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SUMMARY

	Phase 1	Phase 2	Phase 3
ENDOWMENT OF PHASE FUND			
Fund for financing the portion on loan		114	456,000
Fund for the financing of the grant quota		102	407,746
TOTAL IN BILLION US DOLLARS	**17**	**216**	**863,746**
Number of farms built	116	2,312	9,246,710
Number of direct beneficiaries as employed farmers	1,745	34,675	138,700,653
Number of indirect beneficiaries (households of the involved farmers)	8,725	173,375	693,503,269
Methods of intervention	100% gift	30% gift and 70% soft loan	30% gift and 70% soft loan
Production capacity of GWe from solar energy achieved	0.01	0.10	408.70

Such a program, financed by the nuclear disarmament process, appears as one of the most concrete proposals to achieve the goal of zero hunger.
It could also contribute to a greener world by achieving a production capacity of around 400 GWe from solar energy.

THANK YOU FOR YOUR ATTENTION

«Bread» prepared with Enset (False banana) tree bark