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THE U.N. WATER INITIATIVE. THE WATER GLOBAL GOVERNANCE AND ITS LIMITS

La iniciativa del agua de las Naciones Unidas. La gestión global del agua y sus límites.

Comunicación del Prof. Dr. Giancarlo Elia Valori, Académico correspondiente para Italia de la RACEF. Honorable de l'Académie des Sciences de l'Institut de France.

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ABSTRACT

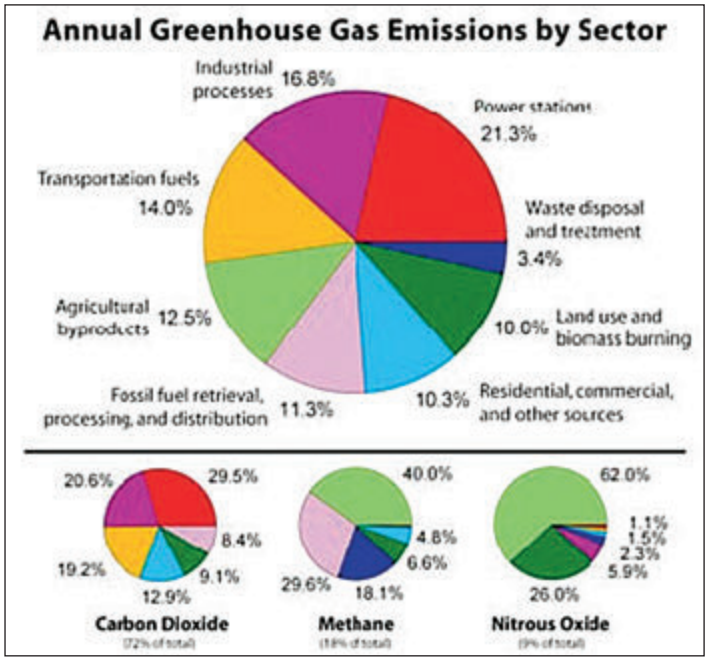
For the United Nations, the key link between water safety and security, distribution of fresh water in the least developed countries and support to quench peoples' thirst lies in this formula: climate change – productivity of land down to agricultura – urban peoples' water survival. Less water will be available for everybody. There will be a different distribution of fertile agricultural land which will determine the world people who will win and those who will lose the forthcoming "food war".

KEYWORDS

Water resources, water scarcity, crisis of water

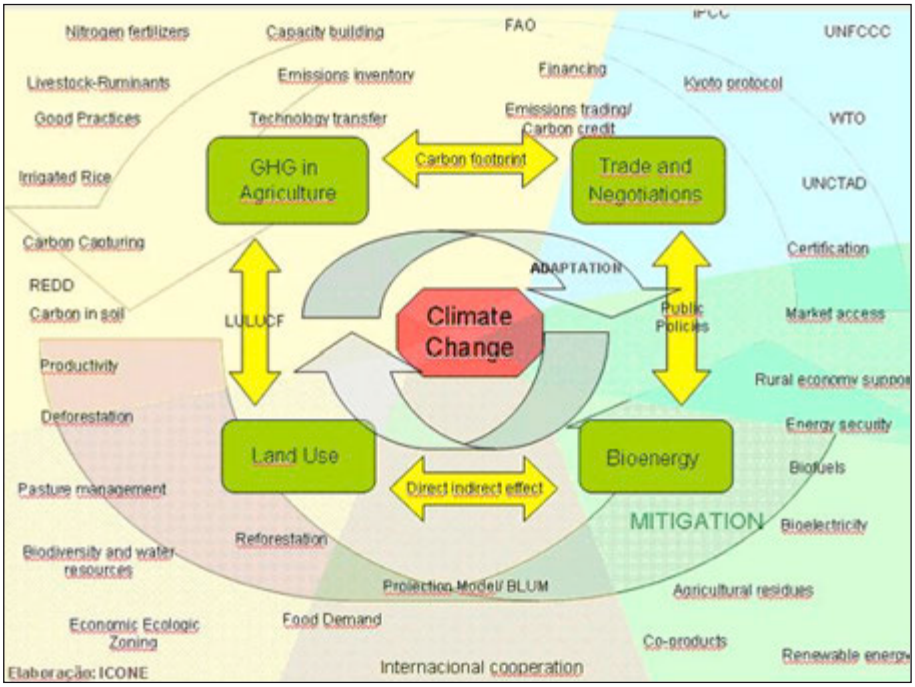
The multilateral tradition is an inevitable part of the U.N. political culture. Sometimes this turns it into the "unarmed prophet" - described by Machiavelli in his book "The Prince" - who "fails" and some other times into the medieval *Everyman*, who chooses Good Deeds and Knowledge to accompany him until the Last Judgement – and, indeed they remain with the soul of the "everyman" until he ascends to heaven and attains afterlife[1]. The U.N. Water Initiative is comprised of 26 U.N. member States with other groups operating in the now well-known "civil society". For the United Nations and all its agencies and "sister" organizations, the key link between water safety and security, distribution of fresh water in the least developed countries and support to quench peoples' thirst, as well as food safety and security, lies in this formula: *climate change - productivity of land down to agriculture - urban peoples' water survival*. For the organizations connected with the United Nations, this sequence is linked to *climate change* and, in particular, relates the survival of the urban world to the survival of agricultural activities which, after all, nourish the "world cities", as Lin Biao called them[2]. If we focus on global warming, which is the core of the U.N. agencies' analyses, in 2025, 100% more water will be needed for irrigation than the amount which would be required without global warming, while the FAO foresees new competition between agriculture and the "environment" for acquiring the ever scarcer water resources. According to the U.N. data, agriculture alone accounts for 14% of the yearly greenhouse gas emissions. Nevertheless it is unlikely for the total organicization of agriculture - which, after all, would push prices upwards – to be able to stop the emissions of said gases. A certain tone of what Benedetto Croce would define "enlightened", linked to the *seductions* of "the great and noble ideas for which you are ready to die", may have changed the view of the U.N. organizations' analysts. Considering the most widespread studies, the effects of increased greenhouse gas emissions will be the following: agricultural areas shall move northwards; species of cereals and produce more suitable for the new Darwinian environment shall be selected; the production of fruit and vegetable, which are the most water-dependent crops, will decrease as a result of the abrupt fall of water available for irrigation[3] .

1. For the English text of the medieval "morality play", see www.fordham.edu area search
2. See http://www.fao.org/docrep/014/i2096e/i2096e.pdf
3. See http://www.ecifm.rdg.ac.uk/climate_change.htm



Annual greenhouse gas emission by sector, from http://upload.wikimedia.org/wikipedia/commons/thumb/e/e0/Greenhouse_Gas_by_Sector.png/350px-Greenhouse_Gas_by_Sector.png

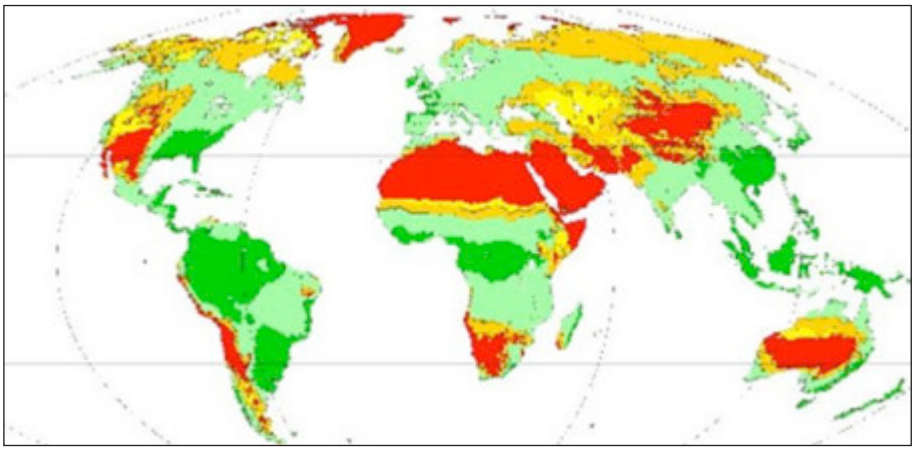
CO2 emissions will increase, which will improve the photosynthesis, but less water will be available for everybody; the sea level will increase by 10-15 centimetres, with obvious effects of salinization of some water on the soil. Temperature will increase by roughly 1 degree C every year, with evident effects on the growth pace of the plants suitable for human nutrition. An increase of wind speed will also be recorded, which will give rise to greater soil erosion. Finally, there will be a different distribution of fertile agricultural land which, with reference to the world trade system, will determine the world peoples who will win and those who will lose the forthcoming "food war".



The mechanism of greenhouse gases from agricultural activities, from http://www.iconebrasil.org.br/imagens/banco/imagens/Aranha%20Ingls.JPG

According to the United Nations, the most probable scenario is the increase of temperature – the decline of global water resources –the increase of irrigation needs – the decrease of rainfall – the structural crisis of water and hence of food. Furthermore, if we consider that, according to the FAO, only 20% of world agricultural land is irrigated underground, we can imagine an ever more stochastic distribution and, in particular, a structural crisis of water supply and agriculture irrigation which, in this U.N. model, will be more severe and destructive for the poorest areas and less significant for the areas practicing a type of agriculture less dependent on *rainfall* [4].

4. See ftp://ftp.fao.org/agl/agll/docs/wsr.pdf

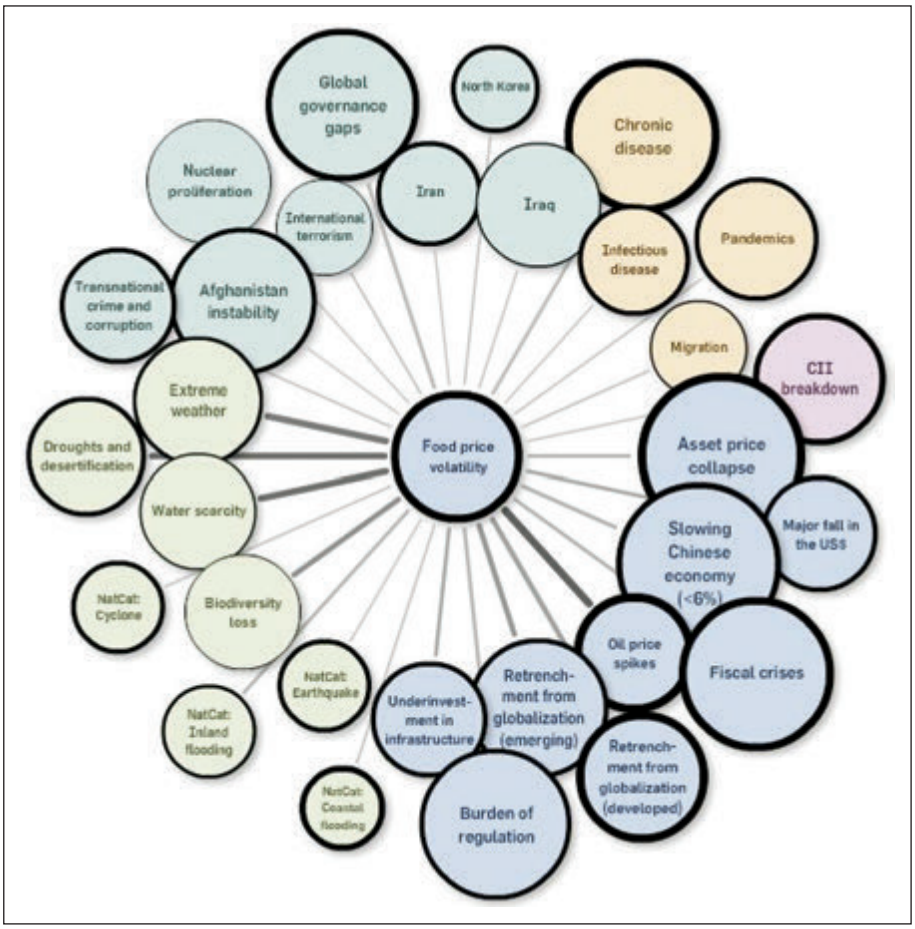


The rainfall needed for agriculture, according to the FAO, from
http://true-progress.com/images/fao-report-agriculture-rainfall-world-map.jpg
The red areas are intuitively those more severely hit by the water crisis.

Another source of concern for the UN-FAO area, in relation to the global water and food issue – and rightly so, in our opinion – is the volatility of agricultural prices. Food prices were stable until 2005 and increased significantly in 2008, with a multiplier of 3.2 times the rice basic price, 2.1 times the wheat price and 2.5 times the corn price[5]. This is the reason for the "bread rebellions" which triggered off the Arab spring, under conditions of absolute political and financial inelasticity of the old local élites. Among the tensions resulting from the stocks crises, which are now global for food resources, as well as from international finance which has invested massively in commodity-based derivatives (an issue on which we will elaborate later on), it is worth underlining that it is precisely the uncertainty stemming from *climate change* and the global water crisis to make the food market structurally speculative. The speculative factors include the foreseen progressive urbanization, which will increase the produce unit value; the climate change which, due to its unpredictability, stimulates the "animal spirits" of short-term world speculation; the production of *biofuel*, whose fixed price is the one set by the market-world of the OPEC-*dependent* system[6], but operates on even lower fuel production prices; the diversification of world speculative funds on

5. See also http://www.ifad.org/events/gc/32/roundtables/1.pdf
6. See http://biodiesel-news.com/index.php/2010/03/22/global-biodiesel-market-analysis-and-forecasts-to-2020/

the food and water system, which depends on their short-term position on the other markets. Some sources report that in 2020 the biodiesel global production will amount to 45,291 million litres; the European Union will be the primary market absorbing 48.1% of world production, often coming from Brazil and Argentina, and the Asian-Pacific share will increase by 4.4%.



The variables of global food price volatility, from http://www.jwtintelligence.com/2010/03/data-point-examining-the-risk-of-food-price-volatility/

However, how does the speculation on the securities linked to the *food* and *water* market work? Banks – also thanks to "enlightened" international organizations ("en-

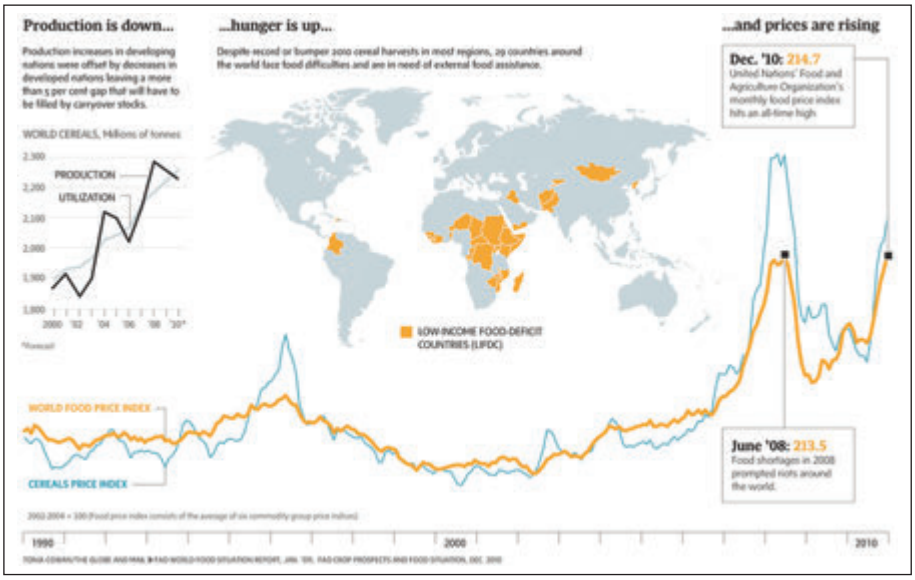
lightened" in Benedetto Croce's meaning of the word) grant contracts to food producers to sell their produce at a pre-set price at a future date. It is the usual *future contract*[7]. Nevertheless, if the stock market (as happens for its intrinsic nature) turns into an oligopoly – and not only "of information", as Vilfredo Pareto called it – the stock holders trade irrespective of the real variability of the produce availability at the end of the "future" contract. Hence *if the prices of contracts, which account for almost whole transactions, rise, also the real produce prices will go upwards*. From 2006 to 2011, the merely speculative share of *food* (and *biofuel*) markets rose from 65 million to 126 million U.S. dollars[8] while, again according to U.N. sources, 44 million farmers were relegated to extreme poverty as a result of the deterioration of the s*hort selling* speculation on food futures, of which the main global indicator is water distribution. It seems that we have gone back to the "hydraulic empires" that Karl August von Wittfogel, the German anthropologist and economist converted to sinology, studied as characteristics of the "Asiatic mode of production"[9]. The effects are now well-known also in the Middle East: 13% of inflation on food price in Syria in 2011; 26% of growth, *rebus sic stantibus*, of food prices in Iran, namely twice as much as the inflation rate; 15% of inflation of food prices in Indonesia again in 2011; an increase by more than 3.5 million "new poor" in Pakistan as a result of the very quick increase of bread and food commodity prices[10]. Also nature played a role in this connection: in Russia two million square metres of cereals crops between Ukraine and Kazakhstan were destroyed in the summer of 2010, which made prices double and raised the expectations of short-terms speculators on the medium-term securities linked to the Russian and former Soviet region's cereals. European productions, France's and Germany's in particular, will probably be 15-20% lower than expected and basically the wheat price records +98%, by also considering speculation, which advances money to producers, but also increases the commodity price. Meat and sugar record + 48% and +32%, respectively, while, according to global market forecasts, rice will record +33%[11]. Obviously the issue regards also tariffs, costs and water management systems for agricultural and human uses[12]. On average, the units costs of urban water increased

7. For a theory – interesting also at mathematical level – of the *future contract* see http://www.nfa.futures.org/nfa-investor-information/publication-library/opportunity-and-risk-entire.pdf
8. See http://www.wdm.org.uk/infographic-how-banks-cause-hunger
9. See K.A. Von Wittfogel, *The Hydraulic Civilizations,* Chicago, Chicago University Press, 1956
10. See http://www.guardian.co.uk/lifeandstyle/2011/jul/17/food-prices-rise-commodities
11. See http://www.adb.org/documents/reports/global-food-price-inflation/food-price-inflation.pdf
12. See the issue, from the principles viewpoint, on the web link http://www.worldwatercouncil.org/fileadmin/wwc/Library/Publications_and_reports/New_Water_Politics.pdf

by 6.8% in the last year for which we have global data, namely 2010, and the average cost in major world cities is 2.03 U.S. dollars per cubic metre. Conversely the cost for collecting and disposing waste water has increased by 155% on average, again taking into account the 271 cities considered in the survey quoted[13]. This means, however, that, apart from some exceptions (Tbilisi and Dublin where water is still free for the people) the average cost for managing and treating waste water *is no longer affordable for most urban people, especially in Third World poor cities and in the expanding megalopolises, such as Mexico City*. Basically, poor people pay more for water than the peoples living in the First World and undoubtedly this has effects on the health, standard of living and purchasing power of marginal classes, and particularly on average life expectancy. As is well-known, at least in Western Europe, the real "leap forward" in the average life expectancy was recorded with the spreading of drinking water in all urban and peripheral areas from late 19th century until mid-20th century in Italy. It is estimated – and obviously figures are generic considering the inaccuracy of world statistics - that a lack of drinking water leads to such an increase of severe and disabling diseases and wider spreading of infectious diseases as to reduce life expectancy, in the regions characterized by a gradual, cost-induced scarcity of drinking water, by 14% compared to the previous conditions of comparative abundance of water resources. Currently about 1,1 billion of human beings live under conditions of scarce access to good quality water, whereas 2.6 billion people have scarce or no access to basic healthcare. The mix of these two effects could lead to a difficult, if not impossible, agricultural rationalization of Third World's land - namely the less exploited land, best suited to intensive cultivation – and hence to a cascade effect starting from a high water price, with its social impact, to a very high food price for Third World countries, which subsequently leads to a problematic increase also for "First World" countries[14]. In the future we may record "bread riots" at global level, and precisely in the areas where it is vital, also for the markets having a greater absorption ability, the expansion of water-rich agricultural activities which can no longer be afforded in the industry-rich areas of the First World – and this regards also China. Every year 1.8 million children die of diarrhea; apart from the evident moral considerations, this will bring about a quick ageing of population, also of those who – unlike the Fist World's – could provide a large amount of active manpower.

13. See, http://www.globalwaterintel.com/archive/12/9/market-profile/global-water-tariffs-continue-upward-trend.html
14. See http://www.globalissues.org/article/601/water-and-development#Thescaleofthewaterproblem

Furthermore, the United Nations rightly think that the water scarcity issue is not a Malthusian model, namely a mere linear link between scarcity of resources and comparative overpopulation[15]. In other words, the mechanism regulating water availability, the level and health of population, its density and its ability to become productive is a *historical mechanism*: there exists no overpopulation in abstract terms; there is no absolute average availability of water resources and, in this case, prices are structurally not regulated by market mechanisms which, as demonstrated by John Maynard Keynes, work well only when there is a real alternative on the market, which is hard to conceive for water resources, also in European countries and the United States (where, after all, the unit prices of world drinking water have increased more).



From http://beta.images.theglobeandmail.com/archive/01109/nw-food-graphic_1109261a.jpg

Hence, the strategies to privatize the water cycle[16], already well-widespread also in the Third World, are irrational: multinational companies implementing them have a "fixed grid cost" which does not depend on the number of possible customers con-

15. See http://hdr.undp.org/hdr2006/
16. See http://www.nber.org/public_html/confer/2004/si2004/ee/galiani.pdf

nected with waterworks[17], and a fixed maintenance cost which does not depend on the number of grid subscribers. Therefore, if the return on investment (ROI) is calculated according to the criteria which are studied in all world Management Schools, tariffs will be such as to make consumption decrease also for affluent customers and eliminate the share of poorer customers, thus generating critical externalities for the whole economic system and the companies which distribute water and treat it. This does not allow the cost-effective use of plants and, in particular, it allows an increase of the production cost and of possible support organizations for pensions and sickness. The water cost increases too much; the labour and agricultural and industrial production unit costs increase more than proportionally. The World Bank's policy to privatize waterworks in Latin America, started in 2002 with reference to the "structural adjustment" policies that the financial organization had implemented for those countries, generated people riots – as is now well-known to experts – but, in particular, a further closure of the internal market and, hence, the indirect need for greater "structural adjustments" from abroad which, under conditions of financial resources scarcity also for the First World countries, are destructive for both parties[18]. Probably the Italian liberal and free-trade economist, Ernesto Rossi, one of Luigi Einaudi's closest disciples, was not fully wrong in proposing a real "parallel Socialist economy" for basic commodities, which would be distributed by the State, at very low unit costs, and would allow to create the "labour army" which would set again into motion the Italian economy destroyed in the aftermath of the Second World War[19]. And the Florentine Ernesto Rossi was precisely the man who polemized with mayor La Pira, known as the mayor of God, who wanted to support with State funds the Nuovo Pignone industrial plant that the owners threatened to close due to a slump in demand. One thing is enabling the masses to have the *possibility* and the *ability* of working, and another thing is forcing unemployed people to surreptitiously and secretly pay for the "faked work" of subsidized factories. Moreover, it often happened that, after global water companies escaping from a not sufficiently *profitable* investment, third countries' governments were forced to allocate further funds for water management and to basically set a fixed ceiling for tariffs. Needless to say, this is *a cost*, and in this regard the neoliberist theories are perfectly right[20]. And if it is a cost, the government shall transfer resources from a budget item, possibly equally useful, to the one of water manage-

17. See http://www.globalpolicy.org/component/content/article/209/43398.html
18. See http://www.thedailybeast.com/newsweek/2010/10/08/the-race-to-buy-up-the-world-s-water.html
19. See Ernesto Rossi, *Abolire la Miseria,* (Eradicate Poverty), Rome- Bari, Laterza 2002
20. See http://www.wdm.org.uk/resources/briefings/water/trickyquestions21022006.pdf

ment subjected to price control. It is worth recalling that the damage caused by an under-distribution of drinking water and water for agricultural uses *is suffered* by the people in terms of life expectancy, diseases, adaptation to work, sharing of roles and tasks within families, demographic development and sustainability of young people's health. Also in the First World, after the financial crises of the early 1990s, and especially after the yet unresolved recent crisis started with the U.S. *subprime* bubble, the States can no longer afford the costs of water distribution at prices, if not subsidized, at least at cost price, also under conditions of comparative decrease of population (who, however, gets older and hence more water-dependent). Furthermore, we must add to these outlay costs, also the costs for the adaptation, renewal or even expansion of infrastructure for water purification and distribution. Hence the calculation of outlay costs turns into a useless exercise of actuarial mathematics and statistics. Therefore also in our First World, multinationals (which were created to manage standardized products though having high value-added, but not water which, according to the marvelous "Canticle of the Creatures" by Saint Francis of Assisi, is produced by God) do not succeed in optimizing their tariffs and reach all prospective customers considering that a listed company tends to minimize investment to distribute dividends or be "liquid" (obviously in the financial sense) and solvent towards creditor banks. If this happens, also the financial resources that many neoliberist governments granted to water multinationals at the beginning of their adventure in Latin America and Africa, fall flat and turn into grants for rich people and not for poor people[21]. As we have already mentioned, the issue is more evident in Africa. Moreover, in the Black Continent, water privatization goes hand in hand with the industrialization of agriculture for export to the First World countries. For example, Nestlé has 67 factories for the bottling of beverages it sells in 130 countries. Water used in medium value-added activities replaces the use of water in the local people s life habits, takes it away from agricultural activities and mass health management and reduces the water share available for agricultural activities[22]. This situation is bound to worsen the global water scarcity, considering that - after the First World countries having already fully exploited their traditionally scarce water resources - in the future Third World countries shall provide water for everybody, including us. According to the United Nations, within 2025 two thirds of the globe will be water-scarce and for the United Nations organization water is a right, not a *commodity*. At theoretical level, the commodity has the same distribu-

21. See http://users.unimi.it/bright/wp-content/uploads/Thibault-Petit.pdf
22. See http://www.newint.org/blog/majority/2011/06/20/africa-water-privatization/

tion costs in the whole market; it is not an immediate survival tool, but a product which, precisely for its basic replaceability, is a market in which the most efficient products can be selected. We can easily understand that, in the case of water, Adam Smith-style conditions cannot materialize, irrespective of the legal ownership title and the possibility of determining its temporary aspect of *commodity*. Moreover, as often demonstrated by the experts of econometrics, *on average public water has a lower cost than private water, at the same quality and distribution network*[23]. At a time of politics fiction and especially of finance fiction, we could imagine to separate the network maintenance and management costs, as also envisaged by the E.U. Directive[24], to be attributed to a local authority which must operate at cost prices calculated with the benchmark system[25], and not with the historical cost system. We can calculate the water average cost as a function of the extraction-purification cost and of taxes, and distribute this average cost by also considering, however, *that the unit cost for the maintenance and management of distribution structures decreases as water "customers" increase*. Hence we must calculate – on a zone-by-zone basis - a *break-even point* beyond which the management costs, optimized by the maximum amount of users, can be "offloaded" on a possible discount of the water unit price. A rational tax policy envisaging the full allowing and deductibility of VAT from invoices, and particularly from the documents regarding the management-acquisition prices, would further reduce costs.

Considering the U.N. wide literature on the "water scarcity" issue, we must *educate to water saving*. Since the early 1980s, in the far-sighted Helvetic Confederation, TV *spots* advertized the "responsible and limited use" of water resources in a country, such as Switzerland, which is also particularly lucky from this viewpoint. The procedure has already been studied by many international organizations: at first, we must take stock and measure water availability all over the world to avoid nature - the "wicked" stepmother, as the poet Giacomo Leopardi defined it - having bad surprises in store for us. And obviously waste water must be managed, purified, where necessary, from pathogenic substances (both natural and artificial ones) and then – by combining Socialism and free-trade - *sold at a benchmark cost price to farms by possibly being paid in kind*. A global effect of redistribution and control of prices which can be

23. See http://gurkanates.com/index.php?option=com_content&view=article&id=7&Itemid=15
24. See http://europa.eu/legislation_summaries/agriculture/environment/l28002b_en.htm
25. For the theory of benchmark pricing, and its effects, see https://pricetrak.pibenchmark.com/attachments/The%20Price%20is%20Right.pdf

managed by free associations of citizens and users, government agencies and even volunteers' organizations or innovative market companies. We can also manage a network design system at the minimum real cost and possibly go back to a local and community water management in villages, neighbourhoods, small rural areas, schools and hospitals. It would also be necessary – in the evolution of water international law – for the statements of principles as those we have often quoted here to be matched by a doctrine devoted to *water commercial law* allowing to punish – at international level – the most financialized and "short-termist" investment operations in water networks, and to create some new property and ownership rights of water resources which, however, are not *commodities*, as we have already recalled. Who owns water? From the law viewpoint, it is a question which is harder to answer than it may be assumed. It is worth recalling that, in the Sicily of the 19th century, "Cosa Nostra" (the Mafia criminal syndicate) built its initial political and financial fortune by precisely managing necessarily scarce water resources under monopoly conditions. Thanks to this mechanism, which is essential in a rural society such as the Sicilian one, Mafia was able to control "barons", by often funding them as a guarantee of its real power, and farmers, who had to pay economic and social prices to the Mafia water managers, such as many hours of tiring corvées requiring them to contribute days of unpaid work in Mafia-owned land, or accept produce brokerage systems to their own detriment. If, in this fundamental sector, we want to avoid - also thanks to the water scarcity global system – the "middle class criminalization" which has characterized drug trafficking or the trafficking of some other structurally scarce products, we shall think of a strategy to tackle the global water scarcity enabling international law, humanitarian organizations, governments, private financial institutions and technologies to go well beyond the old ideologies which are now outdated and unable to understand and manage the great global issues with which we are confronted[26].

26. See http://www.accadeinitalia.it/index.php?option=com_content&task=view&id=67&Itemid=30