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The employment crisis and green orientation in agriculture: New educational models

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Abstract

This paper will address to the subject relating to the employment emergency and will analyze which are the conditions that can foster a green shared orientation among all stakeholders in the food system. So they can help to identify ways to solve this dramatic emergency.

The study will be divided into three phases:

1. desk analysis on review of current training professional profiles green oriented;
2. evaluation of green employment, labor market and the current training system, with particular reference to the gap between the needs of businesses and provision of training in the sector;
3. thoughts on new green oriented professional profiles and the necessary training.

The result will provide a first assessment of the state of art concerning this fundamental condition for the development of a green society.

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1. The employment crisis

The economic crisis started in 2008 led to a global recession, whose consequences are estimated by the IMF in a contraction of world GNP of about -2 / -4%, a contraction in industrial and trade production (-6 and -12%) and a rise in unemployment of more than 2% (IMF, 2009), with an estimated loss of 61 million jobs, especially for young people, and the rise of inequalities and social instability (ILO, 2014). To this day, it remains an uncertain economic mood and the signs of recovery do not involve new jobs (Nomisma, 2014). Globally, it is increased the employment of low-skilled and highly qualified positions, while the average works are clearly decreasing.

The European Commission in its budget of Europe 2020 believes that about the objective of full employment the actions were not effective (the purpose was at least 75% of the active population), since the employment rate still shows a downward trend and from the beginning of the crisis it fell of about 2% (European Communities Commission, 2015). The unemployment rate of adults (aged 25 to 64 years) attests on 8%, but it is higher for women and older workers and it is particularly low for young people (under 25), which exceeded the 20%. It is estimated that the employment recovery forecasts, very different among the member countries, will cover the areas of high technology, transportation and “greening” of the economy (green jobs).

In Italy, the employment trends reveal the structural problems related to the loss of competitiveness of the production system, to the inefficient services and infrastructure and to the fiscal imbalances (high public debt, budget deficit, widespread evasion and avoidance tax) (ISFOL, 2014). Unemployment levels are higher than the EU average and they are exceeded only by Greece, Spain and Hungary: in December 2014 they were about 13% (more than 3.3 million units), the highest value since 1977, and even worse are the data on youth unemployment, at about 43% and with growing rates (the worst data of the European Union). Temporary employees are more susceptible to unemployment and contracts are more and more shorter. In addition, even if workers with higher educational qualifications are more likely to have job opportunities, the quality is reduced, with a low placement in lower professional profiles.

The analysis of community policies on growth, employment and training brings out some of the contradictions, which are the object of strong economic and policy debate, on the development model on which to base the economic recovery and on the need for a radical change to face the climate environmental crisis, the high unemployment, the low quality of work and the processes of impoverishment even in rich countries. The problems are seen by many authors as an opportunity to transit to an economy based on sustainability, seen not as a constraint, but as a solution (Cole, 2000). It began, then, to revive the “green economy” as a tool of implementing sustainable development, pointing also to the social component of sustainability through “green jobs” to ensure real economic growth.

Environmental sustainability can stimulate investments, encourage the creation of quality jobs, support adequate social protection, but, as the ILO said, on the condition that the incentives put in place for economic recovery are aimed not at maintaining economies of the twentieth century, but at the eco-innovative investments (ILO, 2014).

2. Compatibility among employment crisis, growth and environmental issues

According to the Living Planet Report, which performs evaluations of the ecological footprint, the demand exceeded the offer: that means that many countries, including Europe, are in ecological debt, in other words, they consume more than their ecosystems are capable to produce. If all the world's citizens lived as Europeans, it is estimated that we would need 2.6 planets to provide the necessary resources and absorb the waste products (Living Planet Report, 2014).

The challenge is “*to live well within the ecological limits of one planet*” (WWF, 2014).

From the United Nations Conference in Rio in 1992, has grown around the world, the awareness of the environmental problems that threaten our planet and the need to take action in order to safeguard biodiversity, to guarantee future generations¹. In this debate sustainable development takes on the characteristics of an integrated

¹ In recent years it has fully implemented the concern about environmental degradation and people have increasingly adopted behaviors aimed at

concept, ie synthesis of policies ensuring environmental protection, the development of economy and society. In this context “the green economy” is seen not only as an environmental improvement, but also a new paradigm capable of facing *global threats*, such as: climate change, loss of biodiversity, desertification, depletion of natural resources, pollution of rivers and lakes, the contamination of the food, the disappearance of animal and plant species, which are likely to worsen dramatically the quality of life and jeopardizing the collective well-being.

The strategy "Europe 2020" poses for the countries five objectives to be achieved by 2020 in employment, innovation, education, social inclusion, climate change / energy. Then we need to change lifestyles, to learn to consume less and better, in order to reduce the ecological footprint and at the same time to improve the collective well-being.

The growing focus on environmental issues has led the industrialized countries to impose more restrictive rules for farms that perceived the obligations imposed by environmental legislation as a further constraint to be added to the already numerous obstacles imposed on them. But, in the long term perspective, the introduction of mechanisms for efficient management of natural resources is in fact not just the only way to try to contain environmental degradation, thus ensuring the survival of the right natural habitat, but also the main road to be travelled in order to produce innovation and research for an economic system that has a strong need to re-launch. In this context the *environmental question* (Cesaretti, GP et al, 2013) can turn from a constraint into an opportunity for a renewed boost employment, and a substantial improvement in the competitiveness of the agricultural system as a whole. This sector, but also the industrial, craft and commercial ones, should focus on efficiency and quality of its processes, using advanced technologies, new materials and innovative systems, developed in a vision of increasing compatibility with the safety and environmental protection , to ensure the so-called “replicability of the stock of natural capital” (Cesaretti, GP et al, 2013).

To Environmental issues is not recognized the right dignity of important policy choices, because today prevail purely economic purposes of defense and strengthening of the current model of economic development. There is no critical sense or no will to overcome the social and ecological imbalances caused by its own logic of the pursuit of profit at all costs, while the socio-environmental planetary crisis pushes to realize definitive economic policies, able to reconsider the choices on the basis of an equitable redistribution and social diffusion of wealth produced in respect of the right to a social and ecological balance, in a livable environment.

It should be considered that the possible conflict between the needs of the community and the business choices, make it difficult to implement strategies regarding the overall increase that the company should be able and should will to realize on the value of overall socio-environmental heritage. What, today, it is in question is, in fact, the model of development of the market (trade perspective) pointing exclusively to the objective of profit and competitiveness that by its nature can not be sustainable.

It is clear, therefore, the need for a reversal of the current cultural trend, according to which there is an adversarial relationship between the economic system and the environmental protection, directing the reflection towards a new development model. In the current economic and employment crisis, the environment can not be considered as a “sector” of the economy, but a “public good” and a “factor” of growth.

Only in terms of this reconsideration the environment, a factor that gives priority to the quality of life over immediately visible economic issues, can buy a new potential in terms of employment and stimulating investment, which is not linked to the current model of consumption , but it becomes a stable development goal.

ensuring the growth of a “environmentalist” demand. Environmental pollution is a problem felt by the people of all industrialized countries and there is an awareness of environmental issues now present in all walks of society, involving employees, professionals and people of all ages, all as consumers who demand final solutions. In our country the existing legislation is very chaotic as the “environmental principles” have become part of our legal system very often, due to real emergencies or to implement certain EU directives. As far closer to the Italian law, it should be noted that already art. 32 of the Constitution (which literally states: “The Republic protects health as a fundamental right of the individual and collective interest”, and the art. 9 states “The Republic promotes the development of culture and scientific and technical research. It safeguards landscape and the historical and artistic heritage of the Nation”) stresses the importance of environmental issues.

3. The green jobs in agriculture as a response in terms of employment, growth and environmental issues

In international studies, the expression “green jobs” refers to jobs preserving or restoring environmental quality and de-carbonize the economy (UNEP et al., 2008). The green job also has to translate all the dimensions of sustainability, so it must also be “decent” (quality of employment).

Despite the difficulty of comparing each other studies on the theme, from all the analysis emerges, however, that the green economy can be a factor in economic recovery and we can estimate 60 million new jobs with an ecological conversion of the economy (UNEP, 2011). In Europe, from 2000 to 2012 the data about the green employment rose from 2.5 to 4 millions employees (European Commission, 2014b). During the economic crisis, the green sector showed countertendencies of production and work and it is constantly growing.

In this context, agriculture as producer of food has potential crucial for humanity, because on the one hand they require practices and sustainable production, on the other hand there is the challenge of food security jeopardized by climate and environmental change and by environmental degradation (Pontrandolfi, 2012).

Concerning Italian agriculture, it remains the problem of the still high average age of the conductors (1/4 has over 65 years of age) (INEA, 2014), because the young are more prone to innovation green. The latest studies show that there is a trend of green jobs in agriculture that continues to grow among young people (+ 2% of employees in 2014) (Symbola-Unioncamere Foundation, 2014) and increased job opportunities (23% of farms green plans to hire). Concerning the type of green jobs, those related to the growth in eco-innovation, to the management of packaging to waste, to the reuse of biomass, to renewable energies, to the tourism and recreation in the agricultural landscape are increasing. In addition to the choices that make sustainable a farm, it must also consider all the associated working outcomes, that is the certifying consultants and trainers, manufacturers and installers of eco-innovations, researchers and innovators in the field of green chemistry (Gisotti and Gelisio, 2012).

Still under-represented, however, for lack of investments in the sectors of reference, they are other important works for the sustainable management of resources and the active role of agriculture in the defense of the territory and ecosystems, especially in the context of climate change. With regard to water resources, agriculture will have an increasingly central role and we need investments in human capital for research and application of innovative solutions to cope with water scarcity. There are, then, the works associated with maintaining and combating land and hydro geological degradation. Difficult to find are also analysts and developers of information systems for decision support (for irrigation, health conditions, etc.). We need, therefore, human resources that can work on innovation, planning and design, but also on the transfer businesses (consulting, training) and on land management and systems.

4. Green jobs and demand for new educational models

The ecological works, the so-called green jobs that underpin the green economy², represent one of the most promising areas of development and youth employment in the years ahead. At a time when the economic crisis have increased the difficulties and professional employability for young people who, having completed his undergraduate studies, come for the first time in the world of work.

Environmental education has to play a key role in achieving an integration of sustainable development, economic growth and employment growth of a country. In this context, the priority is the need to have a training system oriented to green jobs, able to: raise awareness and empower individuals to achieve a sustainable society; support the economy in favor of the opening of new markets by taking the factors of quality and innovation processes; promote actions in favor of employment policies to face the current economic crisis.

² To uniquely define what is the Green Economy, we must refer to the document “Towards a green economy: pathways to sustainable development and poverty eradication”, drawn up in 2011 by UNEP, the United Nations Environment Programme, in which the green economy is defined as “the economy that involves an improved human well-being and social equity, by significantly reducing environmental risks and ecological deficits”.

CEDEFOP, the European agency that studies the evolution of the labor market and its implications on the skills needs, vocational education and training, has devoted special attention to the theme of the green economy. The assumption is that the positive effects on growth and employment of energy and environmental policies can be maximized - and the negative effects minimized - only through greater ability to anticipate the needs of new skills and the deployment of integrated policies for investment in education and innovation (ENEA, 2014).

We must ask, in essence, on some crucial issues in order to win the employment challenge of the green economy. How does the work change with the transformations in the areas of energy and environment? What are the skills needed to accompany and accelerate this process? How we could encourage worker and farms to invest in the skills required by the green economy? How education systems and vocational training can help workers and farms to make the necessary adaptations to quickly grasp the opportunities offered by new technologies and green products?

Training is therefore a strategic and indispensable tool towards the green economy and a real income and green jobs growth. In terms of education, we have to highlight that businesses face greater difficulty when they proceed with the recruitment of green jobs, mainly because of technical and “transversal” skills (autonomy, flexibility, ability to work in teams, etc.) that they can be developed only through a greater diffusion of paths alternating school and work.

According to the employment programs of businesses in 2013, the green jobs are difficult to find: in fact they represent 19% of its recruitment having non-seasonal character (that is, in absolute values, about 8,800 units), more that was recorded with respect to professionals not green figures (in which the difficulty of finding concerns little more than a tenth of the assumptions used, namely 9.500 in absolute values)³.

There is therefore a need for specific and quality training (both in the secondary and in the university and higher technical training), that follows innovative teaching methods and is also accompanied by efficient guidance, able to involve in the process of empowerment the entire chain of stakeholders, public and private. Hence, the need for a unit and integrated training project, based on management training; the formation of specific sector skills; assistance and coaching to the development of green jobs (Unioncamere, 2013).

Also, the starting point of specific research and investigations of the reality invested by the changes of the Green economy becomes to know the relationship between the skills offered and required ones. The acquisition of new knowledges through targeted training programs, is also necessary for the maintenance of labor in the traditional employments where the traditional focus on the environment creates new “green skills” (Cesaretti GP et al, 2013). Sector studies deem necessary a better match between the expertise of the workforce and the related question of whether new skills for new jobs for the “rehabilitation” of the existing ones. To ensure the development of training programs that can support this, it is appropriate to promote analysis of sector in order to study the level of employment of the individual sectors and highlight the work roles of the professionals.

By focusing on the segment of the study, agriculture, the professionals more requests in the near future, will be: the organic farmer, the man at the certification of organic products, but also the conventional farmer, agronomist, the agricultural expert, the auditor certification, the inspector for the verification of agri-environmental measures. It will also require a transverse profile as the tour operator environment (farm). To face the heterogeneity of the professional figures that will be created through the development of green jobs, in addition to more general training courses, it will be necessary to provide specialized degree courses, master's, professional training courses adapted, often aimed at adults to convert and upgrade (Viola I, Marinelli N, 2014). It become necessary environmental engineering economics and environmental sociology skills,, but also consumption, marketing and communication ones, mathematical, physical sciences, chemical and natural and urban architecture.

In conclusion, whereas it is estimated that the Green Economy will offer up to 2020 more than 250,000 jobs in Europe, it is clear how is crucial the role of vocational training to enable young people to be able to keep up with the current job offer, giving them the ability to integrate the skills acquired during the years of university education with the necessary knowledge to be able to get into the working world, continuing the same thematic started while studying.

³ Unioncamere, Symbola Foundation, op.cit., P, 98 et seq.

5. Conclusions

The Europe 2020 strategy is strongly oriented to the green economy, but there are some contradiction between growth policies and austerity measures to green economy that many consider inadequate and not very courageous.

Nevertheless, there are also signs of a major transformation of the labor market and signs that companies increasingly see environmental issues as an economic opportunity.

The Common Agricultural Policy 2014-2020 has all the tools for the dissemination of sustainable agriculture and associated works, but it remains to evaluate whether the programs are effectively efficacy designed and consistent with the objectives of the green economy, as investments still seem oriented more to low-carbon economy, while a net requirement of training and work is on aspects of sustainable resource management, homeland defense and adaptation to climate change.

It would be important to invest more specifically in these areas, thus also stimulating the labor market, bringing benefits to farmers and, through the oversight of agriculture in the area, to society.

The green economy sees a profound rethinking of the old way of working, and designing the birth of emergence of new professions. These are specific skills, related to the thousand ecological implications of the ecologic reorganization of the economy, from mobility to the food system, from the conservation and intelligent sustainable management of ecosystems infrastructure. “Green economy” requires a theoretical and practical training of employees, qualified (for functions) and specialized (for issues), in order to define professional profiles in line with the demand for green jobs.

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Acronyms

- ILO - International labour organization
 INEA – Istituto nazionale di economia agraria
 IMF - International monetary fund
 ISFOL - Istituto per lo sviluppo della formazione professionale dei lavoratori
 UNEP - United Nations Environment Programme