

UNLOCKING THE FUTURE

Seeds of Change : Sustainable Agriculture as a Path to Prosperity for the Western Balkans

Executive Summary



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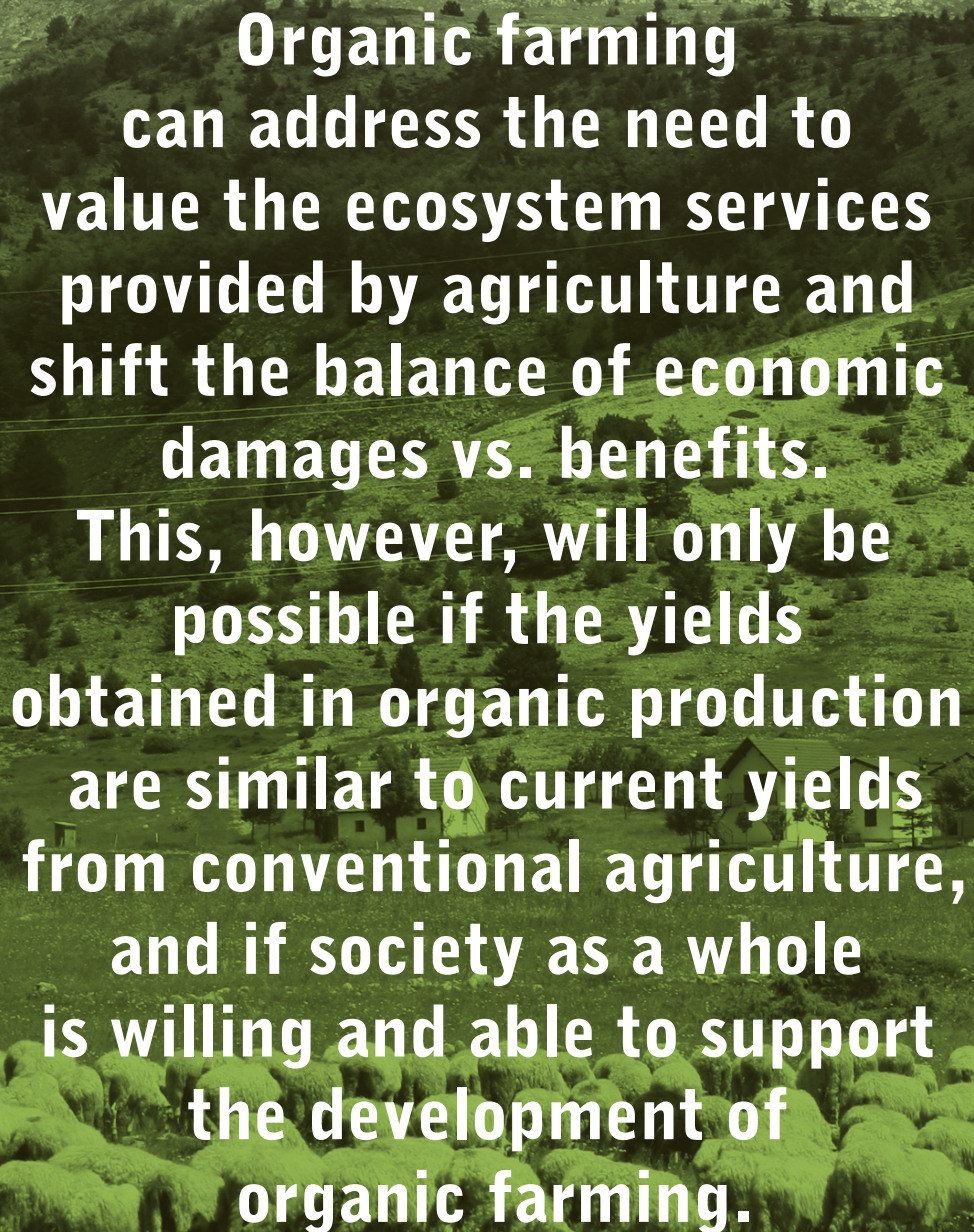
Seeds of Change: Sustainable Agriculture as a Path to Prosperity for the Western Balkans

Executive Summary

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Executive summary

■ Most farming methods practiced today in the region of the Western Balkans are far from sustainable, and major adjustments will be needed to both agricultural practice and policies in order to create the conditions for more sustainable agricultural and rural development.

This study examines what a major shift to sustainable agriculture — epitomized as organic agriculture in this study — would mean for the positive and negative externalities of agriculture as well as for the agricultural sector in the Western Balkans in general. The following are key points from the study.

- 1 The human and social capital in the Western Balkans available for adopting and implementing organic farming scenarios is limited. Because of this, the adoption of large-scale organic farming in the Western Balkans is likely to be slow and difficult without a major strategic decision to shift production and consumption towards these practices.
- 2 The Real Value Added (RVA) produced by the agriculture sector in the Western Balkans, in the baseline year 2009 was negative, at negative EUR 832 million. RVA takes into account damage from pollution, public subsidies, and the gross value added of the sector.
- 3 The Business as Usual (BAU) scenario is not an option that will result in rural development and an advanced agricultural sector. The RVA of the BAU scenario developed in this study is also negative (EUR 449 million).
- 4 The RVA of the ECO scenario, in which the entire agricultural production in the region is converted to organic agriculture by 2050, is positive, at EUR 551 million — due largely to reductions in environmental damages and a better price for organic production.
- 5 An ECO+ scenario adds to a conversion to organic agriculture synergies with sustainable development in the energy sector. This increases the RVA further, to a value of EUR 2,051 million.
- 6 From the above points we conclude that organic farming can address the need to value the ecosystem services provided by agriculture and shift the balance of economic damages vs. benefits produced by the sector from negative to positive.
- 7 Organic agriculture also requires more labour inputs. Major shifts towards organic agriculture would therefore create additional jobs.

- 8 In order to catalyse the further development of the organic food and farming sector, policy makers should put into place a set of regulatory, economic and informative policy instruments favouring the development of organic farming and discouraging environmentally and socially damaging practices.
- 9 Organic farming is low-input from the point of view of the use of external farming inputs, but it is high-input from the point of view of the knowledge and skills required for success. Policy efforts should therefore focus primarily on stimulating the formation of social capital and increasing the human capacities of all stakeholders involved in the organic food chain: production, processing, distribution/trade and consumption. ✕

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INTRODUCTION

Agriculture is vital to the functioning of economy and society. Contrary to most other economic sectors, agriculture is both source and victim of pollution and environmental degradation. Most farming methods practiced today are far from sustainable, and major adjustments will be needed to both agricultural practice and policies in order to create the conditions for more sustainable agricultural and rural development.

This study examines what a major shift to sustainable agriculture would mean for the positive and negative externalities of agriculture as well as for the agricultural sector in the Western Balkans in general. We have chosen organic farming as a ‘case’ for assessing the feasibility of sustainable farming in the Western Balkans. Despite various obstacles, the experiences and evidence from the region suggest that a positive organic farming trend already exists.

CURRENT AGRICULTURAL SYSTEMS AND POLICIES IN THE WESTERN BALKANS (CHAPTER 2)

Though each country is different, there are generally three parallel production systems in the Western Balkan agricultural sector: marginal farmers and pastoralists, family agricultural holdings and agribusinesses.

For various historical, socio-economic, mentality and other reasons, the human and social capital in the Western Balkans available for adopting and implementing organic farming scenarios is currently limited. Because of this, the adoption of large-scale organic farming in the Western Balkans is likely to be slow and difficult without a major strategic shift.

RESEARCH FRAMEWORK AND METHODOLOGY (CHAPTER 3)

The research addresses three important aspects of the debate on sustainable agriculture:

- 1 Employment;
- 2 Food production; and
- 3 Economic performance, corrected for associated environmental costs and public expenditure.

Three development scenarios are examined:

- 1 Business as usual,
- 2 ECO, assuming a complete conversion to organic farming
- 3 ECO+, in which in addition to organic farming there is synergy with the energy sector

The study assesses the baseline conditions in the year 2009 and the three scenarios against the three aspects mentioned above.

DESCRIPTION OF THE BUSINESS AS USUAL SCENARIO (CHAPTER 4)

The ‘Business as Usual’(BAU) or ‘passive’ scenario is based on the assumption that current trends will continue in the coming decades and that any changes in agricultural practice and policies will be the result of passive adaptation to global or some other external trends. It does not include implementation of the range of legal and administrative provisions and agro-technical measures required by the EU. The physical volume of agricultural production (agricultural land surface and number of livestock) in the BAU scenario are somewhat reduced compared to the baseline (2009).

DESCRIPTION OF THE ECO AND ECO+ SCENARIOS (CHAPTER 5)

The ECO and ECO+ scenarios assume that the entire agricultural production in the region will be organic by 2050. Specific assumptions include:

- 10% higher employment in the farming sector than in the baseline because organic farming is more labour intensive;
- Average yields equal to those in the baseline but with a different crop/livestock mix because the existing yields in the region are low due to inadequate agricultural development/poor practices;
- 10% premium price as the market clearing price — to be supported by any number of range of economic policies (e.g. altered VAT structure) or by altered consumer demand/exports;
- Significant improvements in environmental performance.

The ECO+ scenario is a best case scenario, adding to the above also the assumption that agriculture in the region can profit from creating synergy with sustainable development in the energy sector — as presented in the upcoming sister study on the Green New Deal for the energy sector in the Western Balkans.

THE BASELINE SITUATION (CHAPTER 6)

The situation in the baseline year (2009) is as follows:

- 18% of the total workforce in the Western Balkans is employed in agriculture.
- The region has a total of 8.0 million ha of utilised agricultural area and 3.5 million Livestock Units.
- Production is 345 million Cereal Units (CU), mostly cereals, with an average productivity of 21 CU per capita. This is more than enough to feed the region's population.
- Agriculture accounts for 6.9% of GDP created in the region, amounting to a gross value added (GVA) of 4.27 billion EUR.
- The total environmental damage considered includes damage to air and climate, damage to water and damage to soil.
- The total calculated damage from externalities in the region is, at EUR 4.33 billion, higher than the currently calculated GVA from agriculture — EUR 4.27 billion. This leads to a negative Real Value Added (RVA) for the sector. The RVA is calculated by correcting the GVA for the damage done to the environment and for the public investments associated with farming and fertiliser manufacturing, and is equal to negative EUR 832 million for the whole region.

Parameters calculated for the three development scenarios include:

- Expected labour force in agriculture (see Figure 1 for the results)
- Food production (see Figure 2 for the results),
- Gross value added (GVA) (see Figure 3 for the results),
- Environmental damage (see Figure 4 for the results):
 - air pollution,
 - greenhouse gas emissions,
 - water pollution, and
 - damage to soil; and
- Real Value Added (RVA) (see Figure 5 for the results).

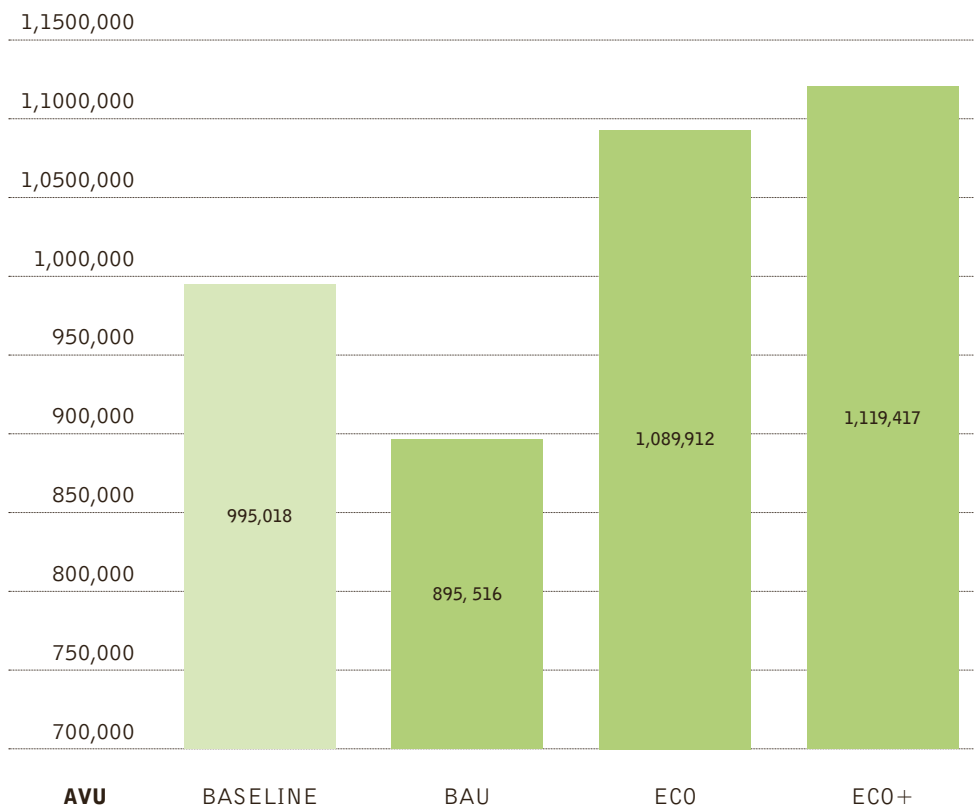


FIGURE 1 LABOUR FORCE IN DIFFERENT SCENARIOS

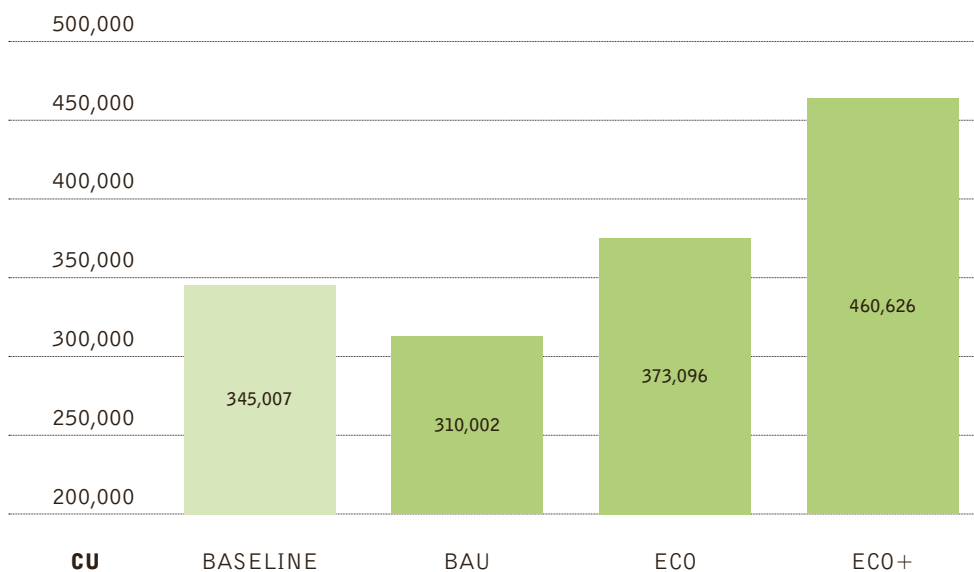


FIGURE 2 FOOD PRODUCTION OF DEVELOPMENT SCENARIOS

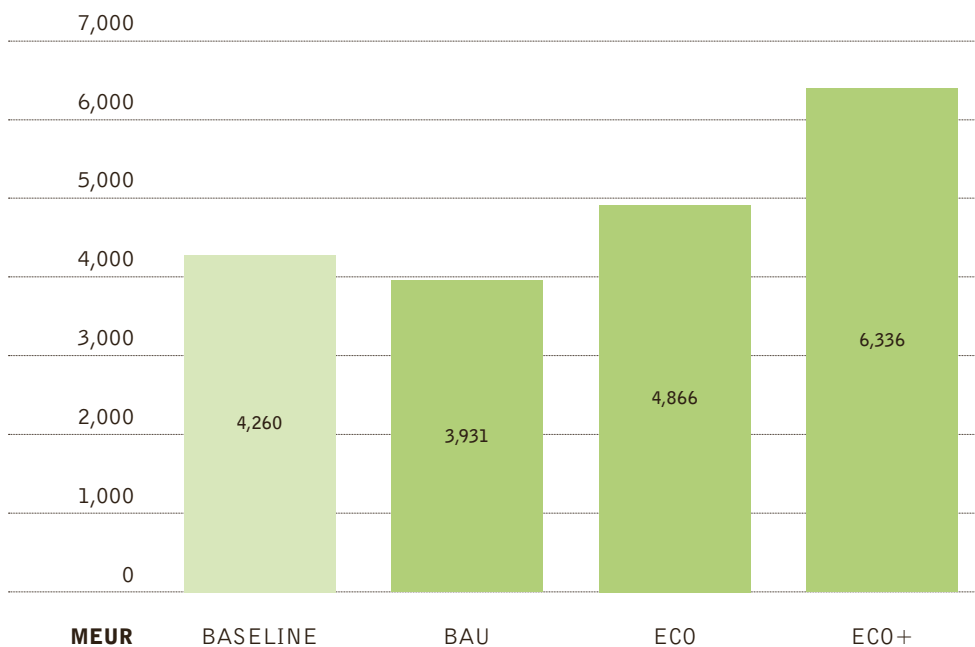


FIGURE 3 GROSS VALUE-ADDED OF DIFFERENT SCENARIOS

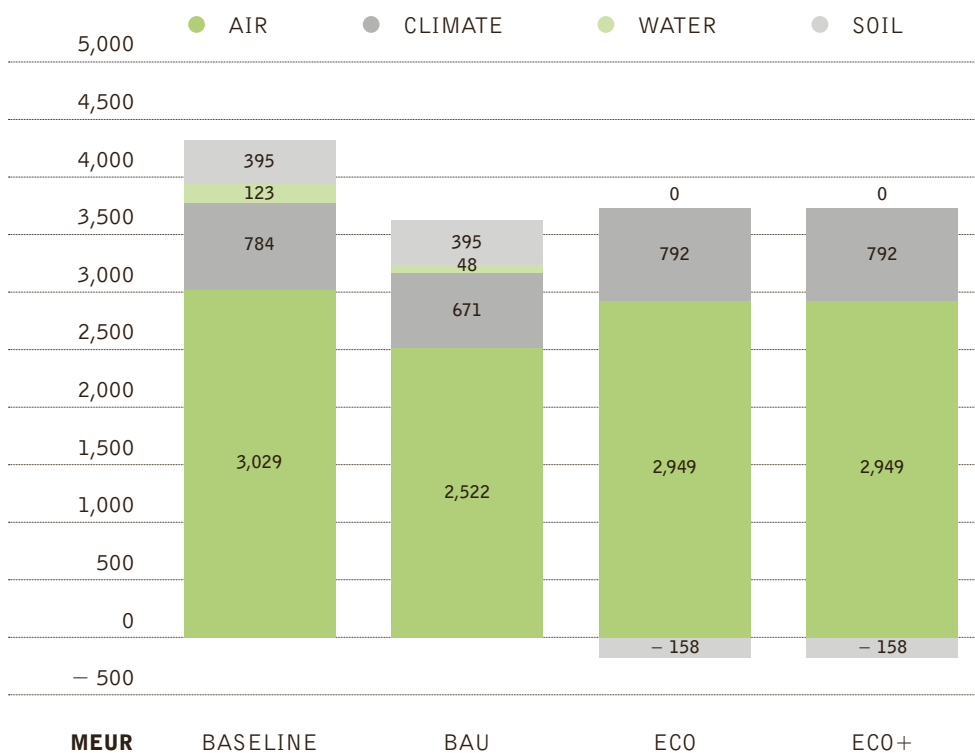


FIGURE 4 TOTAL ENVIRONMENTAL DAMAGE CREATED BY DEVELOPMENT SCENARIOS

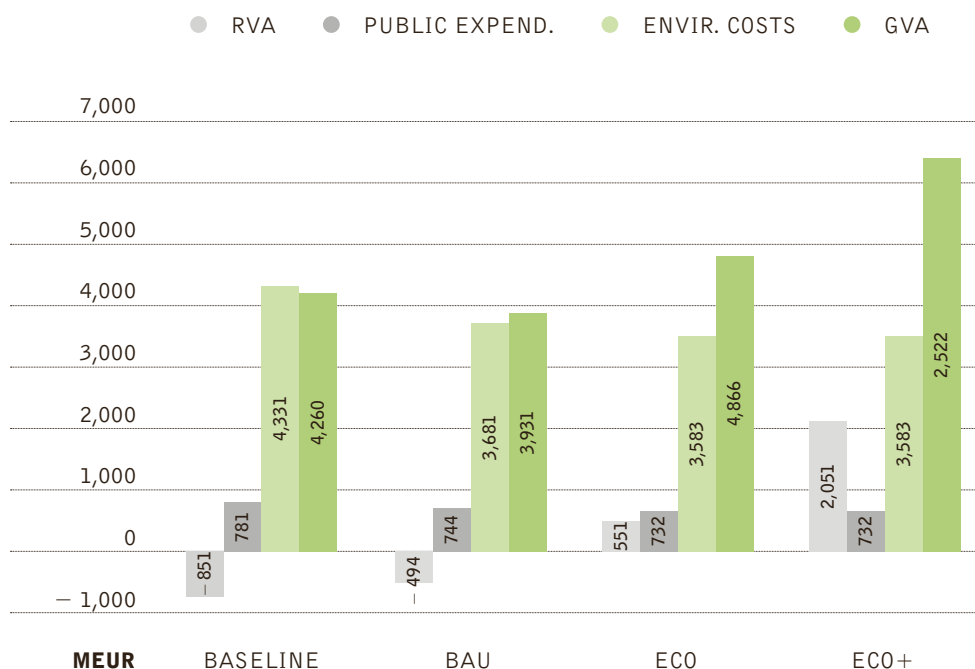


FIGURE 5 REAL ADDED-VALUE CREATED BY DIFFERENT SCENARIOS

The total environmental damage in the BAU scenario is 15% lower than the baseline mainly because it is expected that the heavily subsidized fertilizer industry cannot continue as is (so consumption is reduced by 30%). The total environmental damage in the ECO scenarios is 17% lower than that of the baseline.

Overall, taking into account public expenditures and externalities, the BAU scenario creates an RVA that is higher than the baseline, but still negative. The RVA of both the ECO scenarios is positive due to a higher GVA and lower environmental costs — and much higher than the BAU or Baseline.

THE METHODOLOGY AND RESULTS: DISCUSSION (CHAPTER 8)

The obtained results are influenced by the following factors:

- The methodology employed relies heavily on the concept of external costs in order to capture the value of environmental goods and services. This is not a perfect solution, but is a useful tool in expanding our perception and understanding of agricultural sustainability.
- An important factor in the comparison between the scenarios is that the concept and practice of organic farming differ fundamentally from those of conventional farming, requiring more labour, more intellectual capacity, and a different crop and livestock-mix.
- The reliability of the obtained results is also influenced by the fact that much of the data needed to perform this study was not available or was of questionable quality.

KEY FINDINGS AND CONCLUSIONS (CHAPTER 9)

The most valuable contribution of the results and conclusions presented in this study is in providing a framework for discussion about the feasibility of a large-scale conversion to sustainable farming in the Western Balkans. It also demonstrates the significant impact on the environment from the agricultural sector.

Besides providing food and ecosystem services, agriculture is also an important survival strategy for many of the region's inhabitants. Over a million people from the region are involved in agriculture. By maintaining soil fertility, landscape and biodiversity through the ages, farmers have been the true guardians of important national treasures — soil and biodiversity. They have been the invisible hand managing landscapes, agricultural habitats and enabling farm-linked biodiversity to provide a range of ecosystem services. Pollination; pest, disease, flood and fire regulation; preservation of genetic resources; and the provision of food, fibre, natural medicine, pharmaceuticals and appealing landscapes are only a few of these services. However, the current agricultural market does not value these ecosystem services.

As state above, current farming methods create substantial negative RVA for the sector in all Western Balkan countries. This means that agriculture creates more economic damages than the officially counted benefits — even if many of these damages do not show up on official statistical tables. Organic farming can address the need to value the ecosystem services provided by agriculture and shift the balance of economic damages vs. benefits. This, however, will only be possible if the yields obtained in organic production are similar to current yields from conventional agriculture, and if society as a whole is willing and able to support the development of organic farming. There are two key conditions to achieving these requirements:

- 1 **Soil fertility** must be increased significantly.
- 2 **People and society must be up to the task:** A massive capacity building, demonstration and skills sharing programme (training, research, education, pilot projects, etc.) for various target groups should be introduced.

Conversion to organic farming has several other advantages compared to conventional agriculture:

- It involves increased demand for employment;
- It is more environmentally friendly; and
- It is generally more rewarding — especially if supported.

Current agricultural policies in the Western Balkans are no longer opposed to organic farming. At the same time, most efforts are directed to economic incentives, legislation and market structures favouring big, high-input, specialised agricultural operators.

RECOMMENDATIONS (CHAPTER 10)

In order to catalyse the further development of the organic food and farming sector, policy makers should put into place a set of regulatory, economic and informative policy instruments favouring the development of organic farming and discouraging environmentally and socially damaging practices. Instruments that could be employed are:

Regulatory instruments: More stringent environmental legislation in agriculture, as well as the improvement of the existing legislation on organic farming.

Economic policy instruments:

Punitive instruments:

- Implementation of the already prescribed fines and penalties for those who breach environmental regulations in farming. So far this has hardly been practiced;
- Abolition of hidden subsidies to the fertiliser industry;
- Introduction of ‘green taxes’ on fertilisers and pesticides;

Rewarding instruments:

- Adjust the existing conventional and organic subsidies so that these are based on the income foregone or/and additional costs incurred instead of on the interests of lobby groups.
- For farmers that invest in organic agriculture, introduce some tax incentives, VAT provisions on investment, or accelerated depreciation, as well as low interest loans and insurance for organic farming.
- On the consumer side: lower VAT for organic food or increase VAT for conventional food.

Informative instruments: a robust research, education, extension and public awareness/ promotional programme on organic farming would be of the outmost importance since this would help to build the social and human capital required to realise large-scale conversion to organic farming.

Organic farming is low-input from the point of view of the use of external farming inputs, but it is high-input from the point of view of the knowledge and skills required for success. Since farmers in the Western Balkans have a relatively low level of general education and poor agricultural training, limited human and social capital will certainly be the main obstacle preventing a greater spread of organic farming. Policy efforts should therefore focus primarily on stimulating the formation of social capital and increasing the human capacities of all stakeholders involved in the organic food chain: production, processing, distribution/trade and consumption.

Improving farmers’ capacities could be done through the introduction of targeted training programs and the strengthening of advisory and administrative support. The introduction of systematic training of farmers, especially younger ones, should be a priority.

Additional policy measures that could support the development of organic farming are:

- Introducing green accountancy for agriculture
- Building alliances with like-minded movements, business and consumers
- Taking advantage of EU accession and the funding opportunities therein to promote organic farming.

	Actions to be undertaken which accelerate conversion to organic farming
Policy makers	<ul style="list-style-type: none"> • Strengthen environmental legislation in farming and improve organic farming legislation. Enforce it! • Introduce green taxes on agri-chemicals and continue with subsidies for organic farming. Subsidise loans and insurance for organic farming. Consider lower VAT on inputs for organic farming and on organic food. • Set-up a massive information programme including promotion/awareness raising campaigns; demonstration and research projects; education programmes, advisory system, etc. Introduce organic food in public institutions (ministries and state agencies, kindergartens, schools, universities, hospitals, prisons, etc.) • Prepare and implement an Action Plan for organic farming. Monitor and evaluate its achievements
Agricultural producers	<ul style="list-style-type: none"> • Build more own capacities: agro-technical knowledge, managerial, marketing, and processing and IT knowledge, etc. • Undertake on-farm experiments
Business	<ul style="list-style-type: none"> • Manufacturing industry and trade: provide inputs for organic farming ('eco sprays and fertilisers') • Food industry: increase the processing of organic food — including increased marketing • Trade: offer more organic food in shops — including increased marketing • Banks and insurance companies: provide more favourable loans and insurance schemes to organic producers
Consumers (citizens)	<ul style="list-style-type: none"> • Start consuming organic products as much as possible • Advocate organic food among friends and family members
Research & education organisations and advisory services	<ul style="list-style-type: none"> • Educate on organic food and farming in kindergartens, primary & secondary school and universities • Set-up and implement a massive research programme. Publish results widely • Provide state-of-art advisory systems for organic farming
Environmental NGOs	<ul style="list-style-type: none"> • Promote organic farming and make pressure on policy makers to start implementing actions assigned to them above
Green Parties	<ul style="list-style-type: none"> • Put organic farming higher on the political agendas and facilitate actions assigned above



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