1. Introduction

During the last years many projects promoting sustainability-oriented practices and approaches have been growing in the wine sector. It is a positive signal and it shows the increasing awareness of wine-producers towards a current topic of great importance. Nevertheless the word “sustainability” suggests a diversity of ideas and concepts hardly referable to a single interpretation. It becomes more evident in sectors, like the vinicultural one, deeply connected with territory and agricultural production, bearers of an emotional element rooted in the public imagination tied to the image and identity of landscape. Stakeholders are disconcerted by the considerable amount of initiatives and it makes difficult the development of coordinated actions useful when it comes to creating a joint action model in order to allow wine sector to evolve following the principles of sustainable development. In 2011 the Italian Ministry for the Environment, Land and Sea has started the national project VIVA – Sustainability and Culture aiming at the improvement of sustainability performances of vinicultural chain through the analysis of four indicators: Air (climate footprint), Water (water footprint), Vineyard (assessing the impacts of vinicultural production practices) and Territory (economic, social and cultural impacts). VIVA indicators are scientifically recognized and have been developed following international standards. In the course of the pilot phase, carried on in collaboration with the research center for sustainable agriculture OPERA (Università Cattolica del Sacro Cuore) and Agroinnova (Università di Torino), many well-known Italian wine-growing firms have joined the program. These firms have been selected basing on different criteria (products, geographic location). The pilot phase ended in 2014 and it has leaded to the drafting of technical specifications, a point of reference for all the firms interested in undertaking our sustainability path. We have learned from this experience and tanks to a constant interchange with the numerous firms
joining this program in 2016 we have redacted VIVA Technical Specifications 2.0. This new methodological approach has made VIVA more effective and easier to use. VIVA aims at promoting a coordinate approach through activities in synergy with the national wine industry, training courses and an open dialogue with stakeholders and associations, in order to diffuse the culture of sustainability at national and international level.

**Targets**

The purpose of these Guidelines is to clearly define, as regards wine sector, a univocal concept of sustainability and to promote a common vision related to impacts measurement methods and results communication. They result from the stakeholders’ active involvement, at national and international level, between 2011 and 2016 and the institution of the Wine Observatory on Sustainability (the first international observatory on sustainability in the wine sector), promotes cooperation among the operators of this sector on a topic of strategic importance. These Guidelines aim at becoming a point of reference to recognize and define sustainability models and schemes, providing operators with directions about those elements (good practices included) essential to properly assess impacts and useful to set out benchmarks as regards products guaranteed as “sustainable”.

2. Sustainability and approach: definition

As regards sustainability, it is necessary to agree upon a common approach shared by stakeholders. The ruling definition of sustainable development (inside “Our Common Future” report, 1987) is based on three interdependent elements: environment safeguard, economic growth and social development.

It is impossible to talk about sustainable development leaving aside a holistic approach and the three pillars of sustainability. These three ambiats are officially considered by the OIV (International Organization of Vineyards and Wine) and by resolution CST 1/2004 (and following CST 1/2008) which defines sustainable viniculture as “a global approach of grapes production and processing systems,
combining at the same time the economic permanence of structures and territories, the quality of products, the improvement of precision viticulture, the assessment of environmental risks and products safety, the safeguard of consumers’ health, the enhancement of heritage, of historic, cultural, landscape and ecologic aspects”. Moreover the topic of “cultural diversity” is more and more important: in 2011 UNESCO has widened the concept of sustainable development specifying that “cultural diversity is indispensable for humankind as biodiversity is necessary for nature”. The enhancement of folk traditions, of local agrarian culture, and of artistic and natural heritage is essential aspects of “sustainability” as it is defined. It is fundamental to think of sustainability as a path and not a point of arrival, towards a continuous improvement.

3. Object of assessment (analysis limits)

Sustainability is a shared responsibility in the wine chain. Each operator must be directly involved and must be responsible for the observance of minimum requirements falling within his competence phase. Sustainability must be assessed in the course of the entire product life cycle, according to the “from cradle to grave” approach, including:

- Farming phase (field);
- Production (winery);
- Distribution;
- Consumption and disposal.

It is also necessary to analyze the supplying of products and services distributed during the field and winery phases.

4. Sustainability Indicators

Each action must be measurable, always. For that reason, within each “pillar” of sustainability, it is necessary to identify specific criteria clearly defined through
scientifically recognized indicators and requirements of conformity. Indicators must be able to demonstrate the cause and effect relationship as regards the sustainability targets defined.

**Environmental Pillar**

With reference to the Environmental Pillar of sustainability the targets defined are connected to indicators as regards:

1. Analysis of efficiency and quantity of energy consumption and the analysis of direct and indirect greenhouse gases emissions (GHG);
2. Analysis of direct and indirect water consumption (connected to biological phenomena and polluting actions as well);
3. Assessment of biodiversity in the agroecosystem and other pertaining ecosystems;
4. Analysis of soil preservation efficiency;
5. Management of landscape heritage and the introduction of safeguard measures.

**Social Pillar**

With reference to the Social Pillar of sustainability the targets defined are connected to indicators as regards:

1. Protection of workers (safety and health guarantees);
2. Proper training programs for staff;
3. Promotion of activities supporting youth and women;
4. Management of territory as regards residents and visitors;
5. Attention towards consumers’ safety;
6. Clear and coherent public communication.

**Economic Pillar**
With reference to the Economic Pillar of sustainability the targets defined are connected to indicators as regards:

1. Public utility investments;
2. Investments in green and circular economy;
3. Fair payment for the producers involved in the wine chain.

**Cultural Pillar**

With reference to the Cultural Pillar of sustainability the targets defined are connected to indicators as regards the enhancement of identity of the territory in which the firm operates and the safeguard of cultural heritage (i.e. public interest heritage of cultural, aesthetical and historical significance, representing the wealth of a territory and of its population), specifically:

1. Folk traditions;
2. Local agrarian culture;
3. Archaeological, artistic and natural heritage;
4. Architectural heritage
5. Local productions (also through initiatives promoting wine-and-food tourism)

**5. Verification**

Independent third body verification is necessary in order to guarantee the authenticity of information concerning the sustainability assessment consumers and stakeholders are provided with. The assessment activities must be carried out impartially. Through a sample valuation the verification body must be able to inspect, for each indicator, the consistency of data provided by firms as regards the standards defined in VIVA technical specifications and the observance of requirements fixed for each sustainability “pillar”. According to the “continuous improvement” principle (and in consideration of productive processes changes) verifications should be repeated over time.
6. Communication

In order to guarantee the “principle of transparency” (“an organization should be transparent as regards its decisions and activities having an impact on society and environment” ISO 26000:2010 “Guidance on Social Responsibility”) it is necessary to diffuse clearly and exhaustively all the results recorded and this information must be accessible and available both for employees and for the general public. Communication must be clear and transparent to allow consumers a responsible choice.

7. Continuous Improvement

Sustainability is a complex concept (a social, economic and cultural representation of an eco-dynamic balance model), it is necessary to develop a global approach in order to guarantee the sustainability requirements, previously defined, over time, and the continuous improvement of firms performances as regards sustainability criteria and relative indicators.

8. Good Practices

Together with a scientific committee, a list of good practices will be constituted and approved subsequently to Guidelines adoption. Good practices will be identified as useful tools to employ in order to guarantee results (as regards products and services quality) and minimize impacts, improving firms’ sustainability. Good practices will have to be integrated into models and technical specification so that their accordance with Guidelines could be recognized. The list of good practices will be updated over time, on the strength available knowledge and innovative technologies in the wine sectors, of chiming in with the idea of “sustainability path” aiming at continuous improvement.

9. Promotion of training

Training and professional formation are an essential topic, crucial for the achievement of real targets. It is necessary to promote training activities in order to diffuse more
information and culture about sustainability. For this reason we are also promoting projects concerning the improvement of awareness and active involvement of consumers.

10. Promotion of dialogue

Cooperation and dialogue between stakeholders are fundamental in order to favour and foster the development of sustainability practices. Knowledge sharing and technology improvement allow the creation of synergies useful for promoting cooperation within the vinicultural chain. It is an essential approach allowing anyone involved in this chain to improve the sustainability of processes and products.

Bibliography

- OIV. Resolution CST 12- 518 Et3 “General principles for sustainable viticulture. Environmental, social and economic aspects”


• VIVA – Sustainability and Culture. www.viticolturasostenibile.org

• Wine Observatory on Sustainability. www.wineobservatorysustainability.eu