



**SOLINSA**

Support of Learning and Innovation  
Networks for Sustainable Agriculture

Agricultural Knowledge Systems In Transition:  
Towards a more effective and efficient support of Learning  
and Innovation Networks for Sustainable Agriculture

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# LINSA EMERGENCE AROUND THE NERETVA MANDARINE GEOGRAPHICAL INDICATION (GI)



## SOLINSA SHOW CASE REPORT

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# 1. Summary: Aim, Themes and Research questions of the analysis

## Overall aim of analysis of the showcase

The aim of this analysis was to analyse how the innovation in the value chain organisation, the marketing practices and the husbandry techniques have been initiated/influenced by the process of the registration and management of a Geographical Indication. Specifically, the analysis:

- Examine the constraints to, and opportunities for, development of the LINSAs (Association of fruit growers; Organic IPM GI; Packers - Agrofructus plus others; Agri Chamber Advisory Service;); and
- Critically examine the role of GI in enabling LINSAs development

## Themes of the analysis

The analysis focuses on the governance of the LINSAs, and its level of network integration as follows:

### A. Governance

1. Power relations affect the operation of the LINSAs.
  - How to include small-scale growers in the GI scheme?
2. Effective top-down innovation.
  - Catalyst role played by Agrofructus (Agrokor) in the emergence of the LINSAs and innovation process
  - Role played by the MinAgri
3. Effective bottom-up innovation
  - GI process as a model to mobilise growers and packers and improve their negotiation position (e.g. developing a own labelling and packing policy, allowing to reject retailers labels)
4. Clear processes (communication, decision making, problem solving, dynamics) that enable or hinder the operation of the network

Analysis of information flow and decision making at the association level. The association being very young, most likely some dysfunctions were anticipated to be expected. Identifying them aimed at helping the association to improve.

### B. Degree of network integration

1. Mechanisms Network emergence and development – stimuli, incentives, and drivers (role of the market)
  - Market liberalisation due to EU accession
  - Access to EU market i.e. adapt the product to EU consumer (packaging, values, immaterial quality)
2. Network structure – network diversity operation and linkages, level of actor cooperation
  - Cooperation between the Fruit Grower Association, Growers, Agrofructus and the packers

3. Network formalisation and legitimisation, level of institutionalization, role of the market
  - Integration of packers in the growers association
4. Balance between new and existing relationships (strong ties/weak ties)

How does the GI initiative influence the position of growers in the value chain and their relation to the packers?

*The analysis primarily focuses on the themes A.3, A.4 and B.4*

Themes A1, A2, B1, B2, B3 are addressed within sections related to the 3 main themes.

### **Research questions**

Three research questions are:

1. What is the role of the GI registration in enabling LINSAs development?
2. How are innovation processes boosted/hindered by the leading position of one strong value-chain channel dominant player, when the production side is very fragmented?
3. Can bottom up innovation take place in the context of formalised processes such as GI registration?

### **Methods**

In order to assess the role played by the GI in the emergence of the LINSAs and the formalisation of the LINSAs, the method privileged qualitative and prospective tools. The main reason is the early stage of the process that has not yet produced tangible impacts, if not in the changes of certain practices. The information was gathered through semi-structured interviews of 10 mandarin growers:

- 5 growers affiliated to Agrofructus and involved in the GI protection process and
- 5 growers suppliers of other packers and not involved in the GI process.

Each interview last between 60 and 110 minutes and was conducted in a way to address 9 different points in relation with the themes of the research, but giving growers space to express their opinion on a wider number of issues.

The research also analysed the existing documentation related to the organisations constitutional documents and codification of husbandry and post-harvest practices (statutes, Code of Practice (CoP), traceability systems).

Additional information was sourced from the Food and Agriculture Project “*Support to quality food products in Croatia for improved backward linkages between local agrifood companies and farmers*”.

### **Scenarios**

In order predict the possible development of the LINSAs and to assess the possible impacts, we did discuss 3 scenarios based on two variables - market development and enforcement of the GI system in Croatia.

## 2. Context

### Background

Overall in the region of Neretva, there are 3 municipalities (Ploče, Opuzen and Metković) in which many of the inhabitants are active in agriculture and mandarin production, numbering several thousand small producers. In total, the lower Neretva region has around 12,000 ha of arable land, most of which is reclaimed swamp, dried out and meliorated since the 1960's, starting with a project coordinated by UN FAO.

According to the stakeholder interviews, there are around 2500 mandarin producers in the region, 1600 of which that are economically viable and present on the market, mainly via 14 packers which buy out, sort, calibrate, package and brand mandarins, to be sold on the formal retail markets (local Croatian, regional Balkan and more recently, throughout Europe, including UK and Russia).

The idea of PDO protection of Neretva Mandarines was initiated in 2008, with the analysis of mandarin content by the University of Zagreb mandated by Agrokor. In 2011, growers and packers have started to work with the support of the FAO project on the qualification of Neretva Mandarines and the demonstration of the link to the territory. In the second half of the year 2011, a formal working group gathering growers, representatives of the grower association and several packers met regularly to draft the code of practices including key issues such as, allowed varieties, orchard density, ripeness of the harvested fruits, the conditions of the de-greening, packaging and labelling. INRA experts mandated by FAO have technically assisted the producers and packers in all these steps, and in the definition of the quality control and traceability systems between September 2011 and October 2012. The application passed the GI commission on the 25 July 2013. The GI will be registered in the coming month as the third party objection period is now over without any objection submitted to the competent authority.

In the region, the most prominent stakeholder in the GI registration process are Agrokor, via its subsidiary Agrofructus (leading wholesaler and seller of mandarins and fruit in general, both regionally and nationally), and the Association of producers of Neretva Mandarines, a group of cca 400 producers, which are more directly involved in the GI process, and whose future role will be that of the safe keeper of the Mandarin GI protection status.

### Value chain stakeholders

#### Producers

In total there are over 2,500 mandarin producers present in the Neretva valley, of them are 1600 dedicated, full-time producers. The typology of producers, listing

the approximate number and importance of producers and the relative size of their production, is as follows:

1. Large-scale producers – just a few tens of individual producers (1 outstandingly large producer JAMBO harvesting cca 1000 t), in total there are estimated 20-30 producers, harvesting up to 200-300t/year.
2. Medium-scale producers – a growing segment, between 2 to 3ha size of orchards: 400-500 producers producing 50-75t/year on average.
3. Small-scale – the majority of producers belongs to this category (over 1000 producers), but on the decline. Up to 1,5 ha, producing up to 20 tons each, on average.

Small size of the orchards is partly due to terrain configuration. Beside the land formerly used by the agro-Kombinat, most of the plots are land strips separated by channels. Land property issues (most orchards are grown on leased state land, now to be converted into freehold ownership via preferential tenders by local municipalities) also contribute to plot fragmentation. As a result, most are small-medium scale producers, with up to max 3ha.

The “Neretva Fruit Growers Association” gathered about 600 members in 2011, but was not operating and had no financial resources, as growers did not pay their membership fee. In autumn 2011, 6 packers decided to finance the association with 0.3 Croatia Kuna (1/2 Euro cent) per kilo of collected mandarine. Hundred thousands (100'000) Euros per year were budgeted for the growers association to operate and develop some activities **in relation with the GI registration**. Only part of this amount was consolidated, as couple of smaller packers did not contribute as planned. The organisation has two permanent staff, a president and an assistant and is active in defending growers' interests.

### **Packers**

Thirteen packers are present in the production area, with newcomers lately (8 packers in total in 2009). The major packer is Agrofructus, with circa 50% of the mandarines purchased by this subsidiary of Agrokor, the largest private held company in Croatia, accounting 40,000 employees and having a turnover of EUR 3.6 billion in 2009. Agrofructus supplies 190,000 tons of products, to 15 countries of western and eastern Europe, with an annual turnover of over € 100million.

All packers have their own storage, sorting, packaging and transport facilities, though capacities and technological level differ from one to the other.

### **Other stakeholders**

**Local governments**, namely the municipalities of Opuzen, Metkovic and Ploce support the sector with for instance office space provided to the association for free and space for meetings. The local government bodies are closely linked to the mandarin producer community, and many of the local admin staffs are mandarin producers.

County level government is increasingly active in the support of agriculture in Dubrovnik Neretva County region, but this is still modest.

**Support services:** local extension service and other linked institutions (Karst reclamation institute Split, HCPHS Dubrovnik etc.) are present in the region and support the mandarin sector in practical application and know-how regarding all aspects of the upstream activities.

The **Food and Agriculture Organisation** of the United Nations (FAO) project “*Support to quality food products in Croatia for improved backward linkages between local agrifood companies and farmers*” funded by EBRD has assisted the GI registration process between January 2009 and June 2013.

## 3. Analysis of the themes

### Governance

#### Theme A1: Power relations affect the operation of the LINSAs

##### ***Inclusion of small-scale growers in the GI scheme***

The process of GI being led by most market driven growers and the largest and most technically advanced packers, the risk of exclusion of the smallest producers exists. The exclusion can have two consequences:

1. Because they cannot meet the requirements of the standard, growers can be excluded from the use of the GI.
2. Growers excluded of the re-organisation of the value chain, might not benefit of certain innovations with the quality norms and procedures, that go, as far as growing activities are concerned, just a bit further of the legal and retail sector requirements the moment Croatia joined EU.

To reduce the risk of exclusion, the association is in discussion with the packers and the extension service to make sure that all the growers are well informed and trained on the new requirements.

The efforts furnished in establishing the management system of the GI, and in particular the quality control and traceability systems prepare the value chain to the transformation it must undergo with the EU integration (see below). This is foremost useful for small-scale producers who need more time to adapt to changes. The GI contributes to speed up the enforcement of certain norms that are legally required but not enforced or that will progressively be required by the market (e.g. traceability). Free riders not complying with certain norms of the GI, might on the long-term face a problem to market their product on the conventional market. Hence, the GI might prevent small growers to be completely side-lined of the conventional market.

This does not preclude the smallest growers to pull out anyway from formal market channels. Some of them have sometimes few acres and might not be able to participate to the formal market in the European context. These might therefore opt for abandoning the activity, or engage in niche markets (direct sales, processed products).

In fine, it must be highlighted that size was not a criteria for exclusion or inclusion of producers in the process. The main factor of inclusion was rather the willingness of the producers to get involved in the discussions and work of the working group. However, informal relationships, affinities, partisan attitudes are common in this environment and we cannot exclude that producers were more proactively invited to take part to the process, as noted by 7 interviewed producers:

*“we have no influence because no one has bothered to include us in the work of the organisation” (...) “the association is just an extended hand of the packers, protecting their interest and interests of association*

*leadership towards them”(...) “we do not need the association in the present form, it is of no use to us..”*

It seems one of the problem is the association legitimacy and the lack of trust some producers have in it. The other is the arbitrary discrimination towards certain growers, but without strong evidence of correlation between exclusion and the size of the producers.

## **Theme A2: Effective top-down innovation**

### ***Catalyst role played by Agrofructus (Agrokor) in the emergence of the LINSIA and innovation process***

Agrofructus (Agrokor) has over the 5 past years initiated a number of activities that aimed at establishing new types of business relationship among value chain stakeholders. Agrofructus has:

- started a GlobalGap programme with 70 growers in 2010 (100 in 2013) selected among the largest producers,
- been the real initiator of the GI process
- given the real momentum to the GI protection process by funding the research on the micro-element contents of Neretva mandarines to establish its specificities, asking EBRD and FAO for assistance of the process, and funding, with other packers they convinced, the grower association.

These initiatives are part of Agrofructus strategy that knows that access to certain markets are only possible under certain conditions, difficult to meet if the relation of the fruit supplier is sporadic and only based on seller / buyer.

It is also part of the communication strategy of Agrokor who as a regional leading company has to show social responsibility. In its Sustainability Report 2010/2011, Agrokor writes:

*“as part of our efforts to position the Neretva mandarin on the international market, we launched a project to protect the geographic origin of the Neretva mandarin in cooperation with the Faculty of Food Technology and Biotechnology in Zagreb. (...) The protection of geographic origin is necessary and potentially useful because the quantities of mandarins produced in Croatia are small compared to major producers and exporters, but products bearing protected designation of origin or protected geographical indication marks sell at higher prices and their marketing is more secure, thus contributing to sustainable development of small producers. FAO became involved in our project (...) to protect its geographical indication (GI) soon after it was launched, while the Association of Mandarin Producers is the project owner.*

Beside the pro-active role of Agrofructus to bring together other packers and the growers, Agrofructus is also vector of many innovations thanks to their access to technology and knowledge of the market. The collective action around the GI protection process has however favoured the adoption of certain practices confined within Agrofructus and its direct partners, in particular the mandarin

producers. This includes in particular the translation into action of the defined quality control system:

1. Definition of fruit blocks and identification of parcels by producer
2. Development of the database (together with the IT expert hired for the design of the database<sup>1</sup>), linking parcels, the cropped varieties and the fruit blocks
3. Making available their laboratory to the association for content analysis and organoleptic testing

The role of Agrofructus is perceived by many growers and packers as very positive, as confirmed by the 5 growers affiliated to the packer:

*“With the break-up of the old PIK Neretva, Agrokor was first to organise production, invest in packing facilities, offer cooperation to farmers, introduce GlobalGAP, and start with the GI initiative. It also leads the dialogue and positive changes with other packers.”*

Three respondents were still relatively positive, though raising some sceptical opinion about lack of fairness and transparency when selling mandarins, melons and vegetables. These growers, showing a pragmatic and somehow resigned attitude stated:

*“Accepting the power of Agrokor as dominant force in the region, because of its innovative role by introducing modern packing techniques, laboratory services, and the leadership of the GI.”*

Two of the ten producers interviewed expressed clear reserves on Agrofructus claiming that :

*“Agrokor has too much leverage and power, and their business practices are not honest, when they for instance cheat on quantities and estimate quality, and will always control the producers, even through the GI initiative”.*

### **Role played by the Ministry of Agriculture**

The Ministry of Agriculture, who had an interest to have quality GI applications to be submitted to Brussels once registered at national level, has been very supportive all along the process. Though, the prospective to have then to submit the file to Brussels made the members of the Commission for GI very demanding on number of details of the application. This implied several informal rejections of the file until it has passed the commission on the 25 July 2013.

The personal commitment of Ministry officials who have met several times the working group for instance to push the process has certainly been key in keeping

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<sup>1</sup> *Following the discussion on the GI management system, the Association funded by the packers (with more than 60% of the funds coming from Agrofructus – since it is based on the absorbed volumes – and other packers) has hired a company based in Split to develop the database of the fruits blocks and software that has been tested in 2012 and will be used by Agrofructus and few other packers in 2013 to achieve traceability to the level of the parcel.*

the momentum and give trust to the growers and packers the efforts would eventually pay-back.

Unlike for the registration per se, which is seen as a political success in the Croatian context, not much has been done by the Ministry to accompany the association and give a clear signal that a GI management requires a strong producer organisation. Related to this aspect, the MinAgri and other competent authorities have also failed so far in enforcing the GI protection. That is there is still no effective obligation for producers to respect the Code of Practice, to be certified and authorised user to use the GI. This situation, causing a low level of certified GI in Croatia should however changed over the coming period as the EU should put some pressure to have a clearer policy in the GI field.

### **Theme A3: Effective bottom-up innovation**

#### ***GI process as a model to mobilise growers and packers and improve their negotiation position***

GI process seems to be moving towards stronger cooperation among packers, lead by Agrokor, and in the long-term in direction of the development of a joint strategic marketing platform (joint GI label and packaging, discussing on common pricing policy, joint GI Packing facility, common access to export markets, more transparent pricing policy cooperation with small producers etc.). This is still in early phase, but the current situation contrasts substantially with the completely fragmented value chain observed 4 years ago, where the few attempts of consultations among stakeholders failed to produce any concrete measures. The GI process appears as a catalyst for changes, together with other factors (market conditions, Croatia's EU membership, change in state subsidy policy, etc.).

#### **Negotiation power between growers and packers**

To-date, the 10 interviewed growers fully agreed on one aspects, that is the nature of the relationship they have with packers:

*“Packers define the conditions, but we can usually discuss the quality and the amount of wastage, although the last word is theirs. So far it has always been a very “top-down” relationship.”*

Concrete mobilisation and progress have been triggered by the establishment of the working group that main task was to define the Code of Practice for the PDO, and bringing representatives of both packers and growers. Next, the project itself has called for a number of information sessions, telling to all interested growers (not only association members) about the GI registration process, the rights and obligations, risks and potential benefits of the GI registration, all with the aim of maximisation of involvements of the growers. The perception of five respondents, active or associated with the GI working group, and present at different information meetings confirmed this analysis:

*“A network is getting build, but it is still very early to comment (...) So far joint efforts were useful, especially in offering growers participation and collaboration on the process of the GI CoP elaboration.”*

At the moment of the research, the situation was polarised, between those who are committed and ready to invest in the GI initiative (cca 70% of packers in terms of quantity), and those who plan to free-ride (cca 30%).

The reasons for such polarisation and distrust in the initiative are not clearly identified. Only assumptions can be formulated at this stage, but as the statement of one of interviewed growers

*“I do not see any network, but just the association as a proxy of the packers. I am happy to continue on my own”*

shows individual entrepreneur spirit and general lack of trust in collective actions. This partly explains why a large part of the value chain stakeholders is still observing.

Still, the GI initiative is perceived by the most dynamic and innovative packers as an excellent platform to review the whole value chain governance. Their feeling is this process has helped to overcome the fragmented nature of the value chain and allow producers and packers to discuss openly about important issues good production practices, harvest timing, de-greening, but also marketing strategy. Overall the working group has worked with two-fold approach: more order and better practices upstream, and joint and more sophisticated marketing downstream. Other 4 growers were not aware of any type of network but:

*“(...) strongly support the idea of such an entity in the future, where the GI could serve as a platform to work more closely with packers, due to uncertainty with subsidies and market conditions”*

Generally speaking, uncertainty mainly related to bad weather and problems with quality have made stakeholders more conscious of the need for collaboration.

This constitutes a big change compared with the previous situation where each packer was discussing with *his growers* just during harvest time about price negotiations and lobbying strategy for farm subsidies.

### **The value chain stakeholder negotiation position**

GI process is considered by the growers as an opportunity to increase their leverage in the chain, especially towards packers. This includes an initiative to set up their own packaging facility through the use of EU funds to support producer organisations. The majority sees the GI registration as an opportunity to develop better position internally in the regional value chain, but also externally in terms of market access.

A growing number of stakeholders in Neretva also evoke number of opportunities related to the GI process: joint approach to export markets with GI products, development of a basket of GI products, the development of associated products and services (liquors, jams, fruit juices, merchandise and tourism services associated with the “Neretva mandarines” image), or establishing a long-term sustainable platform.

However growers, particularly, are cautious and have moderate expectation as *“the market will continue to dictate the price”*.

Overall, the confidence that the whole process will bring tangible benefits is not shared by everybody. Three growers doubt that any real changes through the GI are possible and agreed with the opinion of one of them:

*“I do not believe the GI will bring benefits, because people in Neretva are not used to collective action and organisation; dialogue is weak, and packers will reap all the benefits, if any”*

But the majority of the interviewed producers agreed with one grower stating that he expects:

*“... a lot from the collective effort and the GI in term of prices, enhanced quality, and collective brand development. “*

Overall the majority of interviewed mandarine growers sum-up the situation as follow:

*“ (...) more equitable position towards the packers, production costs will go up initially but a better price and more efficient production should compensate in the longer term”*

#### **Theme A4: Clear processes that enable or hinder the operation of the network**

##### ***Analysis of information flow and decision making at the association level***

The GI development process has shown a number of weaknesses of the current grower association:

1. Fragmented, poorly informed and animated membership;
2. Limited capacity in terms of resources (material and human), with
3. Weak governance and management of the association.

All this is now in the process of transformation, especially because of the GI registration initiative: (1) the association has changed its statutes to include a wider number of stakeholders including packers; more funding was made available through a special dedicated fund set up by the packers and growers to cover the costs of the GI System implementation; (2) human resources have been upgraded with some young, educated and motivated employees; (3) governance structure is in the process of strengthening, whereby vice-presidents of the association will take up more delegated responsibility.

Finally, a coordination body in charge of the GI system implementation has been set up, thereby clearly delegating responsibility for the implementation of all practical aspects of the GI protection of mandarins. None of the above would exist if it were not for the GI registration process. The GI being very young, it remains to be seen how all this will be implemented in practice, but overall we can already state that the GI process has instigated a great number of changes in the mandarin value chain.

Still, the majority of the growers are quite unaware of the challenges and work associated with successful implementation of the GI registration in practice: association organisation, rights and obligations of members, investments in

terms of resources and time, adoption of a collective approach to planning and decision making are all tasks that still need to be communicated and implemented.

The shortcomings of the organisation are however clearly appearing in producers' comments and opinion. The vast majority of the 10 interviewed growers are quite critical towards what should be their organisation. They feel excluded from the key debates:

*"We have no influence because the functioning of the association was not very transparent, so far; association is not very active towards members, and there are no formal lines of communication or regular meetings. It is more ad hoc, so it is difficult to exert influence when not fully in the loop."*

But even the growers who are in the loop recognise there is space for improvement for more efficient and transparent mechanisms:

*"We have some influence because we are active members, but in general, very little influence because the association is not perceived by us, producers, as a strong organisation acting on our behalf."*

On the overall, the interviewed producers clearly express the need of improvement, but it is not always clear these producers will do to make it happen:

*"the GI will allow more cooperation with the packers, but also a more active association which should work more to animate producers and to act as a platform"*

## Degree of network integration

### **Theme B1: Mechanisms Network emergence and development**

The entry of Croatia in the EU is definitively a major event that impacts significantly on Croatian agriculture. Many sector stakeholders see it as a threat, with potential cheap imports from the big European producing countries (French, Spain, Italy). The new membership is also an opportunity with the large EU market provided quality and/or price competitiveness.

#### ***Market liberalisation due to EU accession***

In this context, we have to assess the competition on the domestic and regional markets. As far domestic market is concerned, there are some signs that Croatian consumers have a preference for domestic products.

According to a consumer survey conducted by IPSOS in 2012, Neretva Mandarines were known by 91% of 1000 interviewed consumers, who perceived them as higher quality (77%).

These results would indicate that at least part of the current consumers would be faithful to Neretva Mandarines even if cheaper products enter the domestic market. In addition, Neretva Mandarines early harvest (October-Mid-December)

gives a clear competitive advantage that reduces the risk of prices or volumes sold reduction on the Croatian market.

Similarly, Neretva Mandarines reputation is revealed by long lasting and unchanged consumption habits in all former Yugoslavia countries.

***Access to EU market i.e. adapt the product to EU consumer (packaging, values, immaterial quality)***

Agrofructus has engaged in mandarine export several years ago. While volumes exported to the Russian market have skyrocketed, the delivery of mandarines to EU market, and in particular to UK supermarkets (Tesco, Sainsbury's) have progressed but in a more gentle path. According to the packers, the main reason of these supermarkets' interest for the mandarins produced in the Neretva is the organoleptic characteristics of the product. Part of the packers only is able to comply with these customers' requirements. Grading and packing facilities and techniques allowing to quickly handle large volumes and loading them in refrigerated trucks are affordable by Agrofructus and a couple of other packers.

EU retail chains require packing the fruits in cardboard boxes bearing the retail chain brand and without indication of origin of the product, beside the country of origin usually indicated in font on the label placed on the back of the box. The need to communicate the "Neretva Madandarine Brand" has opened a debate on the possibility to progressively market Neretva Mandarines under this name, or for the European market: "Neretva Mandarine, Croatia".

Experts of the FAO project, familiar with EU GI products strategies, first raised this point. The packers and growers were indeed not aware of the danger of loosing all economic benefit of the PDO, if the condition of the use of the appellation and the EU PDO logo was not imposed to the retailers through the specification of the Code of Practice.

To apply such strategy requires however a strong GI organisation if possible gathering all local stakeholders of the value chain. The change of the association statutes to allow packers to become members is a clear step in this direction. However, this raises concern among certain growers, who fear the packers taking full control of the association (see theme B3).

**Theme B2: Network structure**

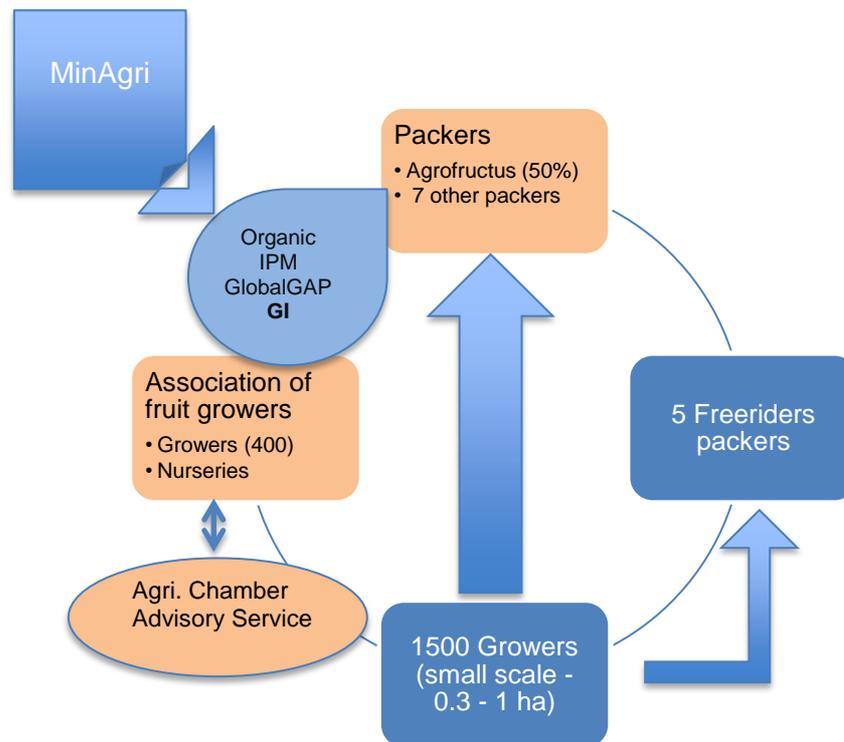
Potentially, the LINSa includes several main local actors and external supporters:

- Local
  - 6 nurseries
  - 2200 growers
  - 14 packers
  - the Association of Neretva Fruit Growers
- External
  - the local advisory services
  - The institute of Adriatic crops and Karstic reclamation

The exchange of experience and knowledge among the local actors have been taking place over the last three years thanks the working group and the information flow between the WG members and the other stakeholders interested in the process of GI.

The involvement of the external stakeholders has been less significant and the exact mechanisms to have them fully included in the learning and innovation process are still unclear.

Figure 1: Stakeholder maps (LINSAs members in orange)



The association intends to explore the following mechanism with the extension service: sign an agreement with the extension service, who would then provide material on mandarins good growing practices, based on the GI CoP and hold number of formal trainings. This would be complementary to the support provided by most of the packers' field technicians on pruning, plant protection and harvest techniques.

It is perhaps too early to assess to which extent the GI initiative influenced the position of growers in the value chain and their relation to the packers. There are however signs of more inclusive approach and more communication between packers and producers.

Packers themselves have expressed their readiness and desire for a more inclusive approach, realising that in order to succeed with the GI, growers must be included at every stage of the process: "after all, the GI protects the mandarins, fruit grown by the growers, not packers."

On the other side, growers are often cautious when packers are “around”, as so far the approach was very much “top-down”, and cooperation was largely limited to harvest management issues. Because of this, there is some scepticism among growers, but overall they see the GI as an opportunity to engage in a more inclusive and fair relationship with the packers, including not just value chain management and innovations, but also the development of new products and associated services (tours, agro-tourism offer, etc.). For those growers interested in the GI, it represents an opportunity to establish more balanced and stronger ties with the packers. For the packers interested in the GI, it represents an opportunity to establish more trust and a better working relationship with those growers prepared to engage in the GI implementation, and to share both the costs and benefits of successful implementation of the GI. As the pricing policy and method of setting the price by the packers was a contentious issue for the growers, the development of a more transparent and fair pricing approach should result in a closer working relationship between growers and packers.

### **Theme B3: Network formalisation and legitimisation**

The Fruit Growers Association, though still in need of empowerment and capacity building, has evolved drastically between 2010 and 2013. Its secretariat has taken over most of the activities related to the application for the registration of the PDO, but it has also played a role in other issues (land tenure and subsidies) to defend the interest of the growers in the region.

The Association has become the interlocutor of the Ministry of Agriculture in the issue of land reform and privatisation, where growers land ownership has been threatened by an auction system, that was potentially opening the doors to outsiders for purchasing large surface of land used by the local growers. This type of activities has reinforced the legitimacy of the association in the eyes of the growers, but also irritated some packers who observed that the progress on the GI file had been slow down. This is also the opinion of some of the interviewed growers who consider

*“the association so far as quite passive, only active on the issues of some training, debates, and acting as a platform for some common problems like policy on subsidies, and land ownership problems in the last few years.”*

The time spent by the Association on the registration of the Melon of the Neretva has been another reason for some packers of mandarine to criticise the association whose mandate was to work firstly on the Neretva Mandarine PDO.

The funding mechanisms of the Association formerly based on membership fees has now being replaced by a contribution of the packers based on the volume of marketed mandarines. Each of the 7 packers associated to the GI initiative agreed to retain 0.005 Euro on each sold kilogramme, and transfer it to the association. This secures the financial resources of the association but clearly reduce the power position of the growers vs. the packers. This financial dependency obviously doesn't help to create a growers ownership over the association and even raise some suspicions, illustrated by a statement of one of the interviewed producers:

*“I am quite negative towards the association, and very sceptical towards the packers and their honesty towards the producers, even with the GI process.”*

Three other growers agreeing with this point of view (*“quite sceptical due to past experience with the association and packers, who are seen as favouring their interests only”*), added however, they are

*“in favour of a more formal management of the value chain and open to discussion as long the association takes the lead”*

The ambiguity of the current situation of the association of growers financed by the packers could be overcome with the integration of the packers in the association, that is now possible, after the association changed its statutes previous to the application of the GI registration. This however, will require the association to define clear decision-making mechanisms where each group of stakeholders can voice its opinion and have its interests protected. The opinion of the interviewed producers is also reflecting the awareness of a well-structure value chain, lead by a strong association:

*“We are in favour of a formal approach (entailing a stronger position of the Association), especially with increased production, lower subsidies from the state, and the emergence of a joint platform with packers, based on the GI. We are in favour of a more formal and institutionalised approach, and a stronger role of the association, but with more transparency on its activities and decisions”*

Considering the lack of impetus of local stakeholders to get organised instead of noting the failure of the ones who try make efforts in that direction, the most plausible scenario is that collective actions will become a reality rather from external pressure than internal will. In that sense, requirements of the market and EU policy might play a great role in the coming few years. This is reflected in the analysis made by the majority of the interviewees who stated that:

*“All expect more pressure from the market, especially due to EU accession, and unsecured access to the CEFTA and especially Russian markets in the future.”*

In summary the EU accession has the following consequences, (i) import from EU countries are expected, (ii) privilege trade conditions with Russia, mainly in form of export licences might progressively disappear as EU member states company historically faces many difficulties to obtain such licences, (iii) new rules for the CEFTA countries.

On the other side, EU access offers the wide-open EU market, provided Neretva Mandarin meet retailers requirements.

#### **Theme B4: Balance between new and existing relationships**

In the post-Yugoslav era (after 1994), the stakeholders of the mandarine value chain have mostly developed business relationships. Other types of linkages between the different groups have not been established and certainly not formalised. It is only under external pressure as explained under the previous

paragraph, that stakeholders have realised the importance to act together in this industry that gives small space to small entities.

As a result the value chain vertical linkages between sellers and buyers have developed much more than the horizontal ones. A turning point occurred with the initiatives taken by AGROKOR and the introduction first of GlobalGAP associating a small number of growers, and the GI with a larger number of producers involved including other packers.

### ***Strong ties***

The relations between single growers and single packers have been the only existing ties among the value chain stakeholders. They have been of business nature, but entailed also certain support services to growers from some packers in order for them to secure quality and quantities.

The new ties that are developing are related to more formal quality management schemes such as GlobalGAP and the GI. A group of 100 growers benefit from the assistance programme established by Agrofructus who has a direct interest to have part of its production certified to enter the western countries retail chains. All producers involved expressed their satisfaction about the way activities are conducted and the benefit they have from their participation in the GlobalGAP programme. This mainly ensures them close technical advice by Agrofructus technicians.

### ***Weak ties***

One horizontal linkage that has emerged over the recent 3 to 4 years is the one formed by the 7 packers involved in the discussions related to the GI and a common strategy of the Neretva Mandarine. This group is however still fragile and several risk threaten its existence:

- Financial difficulties of one single packer could result in the non-fulfilment of its commitments (such as the funding of the association), or
- Adopt a more opportunistic approach hoping to faster access cash
- A change of owner having different strategy and views can result in the packer pulling out of the collective action.

The last event has almost happened with the offer made by an investor to buy Agrofructus in 2013. Though, the interested person withdrew, the uncertainty born of the negotiations between Agrokor and the potential buyer has frozen the process of registration for a couple of months.

In 2012, two of the packers arguing a bad financial situation due to the bad results of the harvest did not or partly, for the second, pay their contribution to the association, despite the agreement reached as year before.

The GI process and the involvement of growers also aim at creating a certain dynamic among growers. This in principle should take place through the association, but as highlighted under themes A4 and B3, the association faces challenges to be recognised as a legitimate organisation representative of the farmers. In that respect a genuine mobilisation and a pro-active attitude of the growers is also needed. The lack of tradition of bottom-up approach is certainly a factor that must not be minimised.

The weak impetus of growers taking full part of the process and the empowerment of the association is also due to:

- The lack of know-how of the association management
- The lack of transparent and regular information on the association actions
- The unclear ownership (packers / growers)

As a result of the still weak position of the association, the involvement of the advisory services for training, face-to-face advice, development of reference material such as a good practice guide for the growers based on the CoP content has not yet been concretely initiated.

The initiative also impacted the horizontal relations between those conducting the process and the ones who are watching. Among growers, the ones who did not get involved are watching without much animosity. The situation between packers is slightly different as the size of the group results much faster in polarised position. A bit less than 50% of packers (representing less than 20% of the volumes) have shown little interest in the protection of the GI.

## 4 Scenarios

The initiative to register the GI and other side-initiatives aiming at improving the value chain efficiency are still in their early phase. To try to assess their impacts we have first to assess their sustainability and how they contribute on the long term to reinforce the LINSAs still in constitution phase at the time of the research. The result of this analysis should also help the formulation of recommendations to accompany the producers in forming their LINSAs.

Considering the push might come mostly from outside to transform any individual attempt of collective action, we'll consider two variables to build the possible scenario:

- The market pressure (competition, requirements)
- The policy (enforcement of the GI control and protection)

### Market pressure

For many products, Croatian producers fear massive imports from EU. In the case of citrus and mandarines in particular this fear is moderate: the harvest time and the quality of the mandarines will guarantee the preservation of a good part of the domestic market share. Additionally, the involvement of Agrofructus subsidiary of Agrokor, owning the majority of retail chains in Croatia and significant ones in the whole central and eastern Europe, this risk is also mitigated.

On another hand, changes of requirements by the retail chains will certainly take place, first on export and then on domestic markets. This will entail compliance with standards, as well as packaging and labelling conditions.

Two main scenarios can be foreseen regarding how the market will evolve and how producers will be able to respond. The first is a status quo or a very slow

change in the requirements. This can be the case if producers do not adapt their practices and that at the same time the market does not want to renounce to the Neretva Mandarine. The second plausible scenario is that the buyers are clearly requesting certain standards.

Policy enforcement	I. No voluntary policy to enforce the GI system <ul style="list-style-type: none"> <li>• No control</li> <li>• No certification</li> <li>• No protection against counterfeits</li> </ul>	II. Enforcement according to EU rules within 2 years <ul style="list-style-type: none"> <li>• Obligation of certification of the product</li> <li>• Obligation of the certification of the producers</li> <li>• Control on the market</li> </ul>
Market		
A. Retailer requirements harmonised with EU market standards		
1. The current markets are getting more difficult to access (RU, Eastern Europe)	Growers and packers have to comply with GlobalGAP or retailers own standards on generic quality.  But the voluntary implementation of the GI standard that entails the main critical points of any quality standards might be accepted by clients as a sufficient guarantee of quality	Packers have the choice to comply with the CoP and getting certified to market the certified GI or to market mandarines without the GI on the generic market.  The compliance with voluntary or retailers standards become unavoidable unless the GI standard that entails the main critical points of any quality standards is accepted by clients as a sufficient guarantee of quality.
2. The current markets are still accessible (RU, Eastern Europe)	Number of packers tries to sell most of their products to alternative markets (ex-Yu and Russia) to avoid the costs of compliance with the new requirements of the domestic and EU retailers.	In a first phase, packers try to market mandarines in the regional export market, without investing too many efforts in the GI certification.
B. Domestic retailers are not able to impose their standards or the compliance with voluntary standards such as GlobalGAP		
1. The current markets are getting more difficult to access (RU, Eastern Europe)	Packers have to find a balance between the products marketed on the domestic market and the volumes exported to EU that by definition would grow if export to eastern markets phase down.	Part of the packers engages fully in the GI certification and builds a marketing strategy around the GI, reinforcing their negotiation power on the different markets.  The other packers continue to market their product as have done so far but without the GI name on the domestic market. The risk of this strategy is limited marketing channels (wholesales and green markets) or lower prices due to absence of any quality guarantee for retailers.
2. The current markets are still accessible (RU, Eastern Europe)	This is the <i>status quo</i> scenario. Packers adopt an opportunistic approach that allows them to have only one part of the production certified against voluntary or retailers standards for marginal export to EU  A large part of the production can still be marketed on the local and regional market as Neretva Mandarine, even if not certified. Important volumes can still be sold on the Russian market., but Neretva mandarines are not substituted by import on domestic market.	Part of the packers engages fully in the GI certification and builds a marketing strategy around the GI, reinforcing their negotiation power on the different markets.  The other packers continue to market their product as have done so far but without the GI name on the domestic market and possibly with the GI name on ex-Yu countries.

## Policy

In regard to enforcement of GIs control and protection, the Croatian MinAgri has so far been very tolerant towards non-certified GI products. Under the EU system, though each single member state has a certain freedom to implement EU regulations, it is expected that a more strict control is implemented and that only producers who do respect code of practice can use the name of the GI. This means in concrete terms that packers marketing their mandarines under the appellation Nerteva will have to demonstrate to comply with the CoP, i.e. have the traceability and quality control systems in place and being certified.

Having in mind the close interrelations between growers and packers, it could be anticipated that once this process starts, the majority of the packers will follow the trend.

The possibility that the Croatian authorities buy some time before to pressure their producers to implement the whole management system of the GI still exists. In this case, all CoP will be implemented progressively without preventing users to use the GI name abusively.

## Implications of the different scenarios on the LINSAs development

### A Scenarios

A clear improvement of growers and packers capacity is needed. This also implies the implementation of the traceability and quality control. This will require a general effort by all the value chain stakeholders who want to reduce the risk to be marginalised on the market.

The two A2 scenarios might offer the possibility to packers who are not so keen to invest in capacity upgrade (their and the one of their fruit growers) to still have alternative markets in ex-Yu.

Globally, the A scenarios will require capacity upgrade and the establishment of traceability and quality control systems. The choice to opt voluntary standards (e.g. GlobalGAP) or retailers standards against the GI standard, might however fragment the LINSAs as it allows each packers to have its GlobalGAP certified group of farmers. The GI approach has more chance to include a larger number of growers and bring together packers to develop a joint marketing strategy.

### B Scenarios

With the exception of the status quo scenario (B2 x I), all others scenarios imply changes in the management of the value chain, growers and packers practices. In absence of governmental clear GI enforcement policy (B1 x I), it is unlikely that packers and growers will make the effort to comply with the CoP and will seek the certification of the GI.

This would have a similar negative implication on the LINSAs development, with an even more limited number of growers involved in standards adoption, i.e. needing to upgrade their growing practices.

Both B x II scenarios will favour the adoption of the GI by the majority of packers and growers. Only a minority of packers and growers will make the choice to keep their practices unchanged as they 'll lose the possibility to use the GI name on the domestic market.

## 5. Conclusion

### **The role of the GI registration in enabling LINSAs development**

The analysis of the scenarios shows that the GI registration can play a key role in bringing the value chain stakeholders together, independently of the market. The condition for this to happen is however the GI to be envisaged by the producers and by the authority by a quality approach (EU concept) and not by a simple intellectual property tool (Ex-Yu concept).

If envisaged under this perspective, the GI registration process calls for the establishment of formal and informal bodies to facilitate implementation of the GI protection, mitigation of conflicts and communication among stakeholders. Such a body has been set up in 2013, consisting of the representatives of producers, packers and local government. Its first mandate was the facilitation of all relevant aspects of the GI registration, with the ultimate goal of overseeing the process of joint marketing and pricing strategy.

The scenarios analysis also shows that the role of the competent authority is key. Without enforcement and the constraint of GI implementation, experience in many transition economies shows that nothing is done after the registration. If nothing is done, innovation, changes of practices, i.e. LINSAs are not needed.

### **The role played by Agrofructus**

**Or “How are innovation processes boosted/hindered by the leading position of one strong value-chain channel dominant player, when the production side is very fragmented?”**

#### **Boosting factors**

Agrokor as a dominant player has facilitated the GI process from the very start: financing the scientific studies on micronutrient content of mandarins, offering its facilities and capacities (laboratory for testing and traceability system), and raising awareness of other packers on the importance of the GI registration as an inclusive process. In general, the leading player has so far been very positive in its efforts to instigate innovations and better practices on the production side (as prescribed by the requirements of the GI); this is only logical, as better practices upstream should lead to better quality produce and more efficient supply chain.

Small-scale producers affiliated with Agrokor are also more likely to get involved in the implementation of the GI registration (a process that contains a number of requirements and innovative approaches to growing and trading of mandarins), as Agrokor already applies a GlobalGAP system of quality assurance with the most advanced growers who supply them.

A very inclusive attitude of Agrokor towards other packers and producers in general (not just its own supplying growers) has so far helped in establishing trust, or minimised the emergence of distrust. Agrokor is also very active in efforts to better organise, equip and empower the association of producers, so that it can function as a proper functioning producer organisation, and to be a serious partner and custodian of the GI registration implementation.

### **Hindering factors**

Inevitably, some packers are very suspicious of an initiative that is strongly led by a dominant company in the region: there are always rumours and vested interests at play. Some packers are difficult to approach on their involvement in the GI initiative, and some have even started to express the “free-rider” attitude towards the GI initiative. These however represent a small percentage of the overall mandarine packing business in Neretva.

The fact that the production base is so fragmented as in the case of Neretva, small-scale producers have the possibility to organise themselves as interest group towards packers, even to become vertically integrated producers/packers themselves. The EU Common Market Organisation shall trigger the constitution of such groups that are then eligible for EU subsidies. Indeed, there is already such an initiative, although in an early stage of development. In this scenario, the attitude of packers, being so far in a dominant position, could change and become more defensive.

The real test of commitment by the big packers will be reflected in the extent of their support (or opposition) to the process of professionalization and capacity building of the association of producers, including related innovations in its organisation. The association must become more robust and vastly more competent in order to be capable of implementing of the GI initiative in Neretva.

### **Bottom up innovation in the context of GI registration**

If by innovation we assume all the processes and practices necessary for the successful implementation of the GI initiative, then we can state that a lot remains to be done in this context in case of Neretva Mandarine. It is important to state that the GI registration process, especially the process of drafting and finalisation of the GI CoP, was a very open process in which small producers were fully included, which was an innovation in itself. A number of suggestions were put forward by small producers, and all aspects of the CoP, including those to be inspected via the control plan, were discussed and agreed with small producers, both within the working group, and by vetting them in large open sessions organised by the association.

Starting from the upstream side of production (seedling production and certification, planting and agriculture practices in the orchards, plant protection, harvest management etc.), a number of requirements in the GI CoP will ask for a more methodical and professional approach to primary production (this is most obvious in extreme situation like drought and heavy rains/snow/frost, where current space for intervention and adaptation is very limited). Implementation of all the requirements of the GI registration in the field should instigate a number of innovations, starting with the introduction of a fully certified seedling production

system or facility in Neretva, which is something that was lost with the break-up of the old “kombinat”.

Next, the implementation of the traceability system and all associated activities also requires a number of new activities in the field and a different organisational approach (sampling, randomisation, lab testing, organoleptic commission functioning, traceability in packers’ operations). In order to implement all this, a number of organisational innovations, including communication, cooperation, delegation of responsibilities, checks and balances, etc. will have to be implemented, as required by the GI CoP. Large number of tasks will have to be implemented in the field, where the efforts of producers will be required; it is not unreasonable to expect their feedback, corrections and innovations, as the implementation process of the GI starts to mature over time.

## Appendix

Questions asked to the 10 interviewed producers  
**GI process as a model to mobilise growers and packers and improve their negotiation position (e.g. developing a own labelling and packing policy, allowing to reject retailers labels)**

Q1: How do you sell you mandarins and to whom?

Q2: who define the conditions (packing, quality, price)?

Q3: What do you expect to be changed with the introduction of the GI?

**Analysis of information flow and decision making at the association level. The association being very young, most likely some dysfunctions are to be expected. Identifying them can help the association to improve.**

Q4: How do you see the role of the association?

Q5: Which influence do you have on the association? If no, Why ?

**How does the GI initiative influence the position of growers in the value chain and their relation to the packers**

Q6: What can you expect once the GI system will be enforced in term of quality requirements, share of margin, production costs?

**Catalyst role played by Agrofructus (Agrokor) in the emergence of the LINSAs and innovation process**

Q7: How do you see the role played by Agrofructus in general and in the specific issue of GIs (positive and negative)

**Cooperation between the Fruit Grower Association, Growers, Agrofructus and the packers**

Q8: What is your perception of the network? Do you see it? Is it useful?

**Network formalisation and legitimisation, level of institutionalization, role of the market**

Q9: market > practices (e.g. traceability) > Procedures > linkages/partnership > institutionalisation

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