

## Wild forest products supply chain and legislation: effects and proposals

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## Outlines

- Moving toward a **legal** WFP definition
- **No data, No policies:** how to study WFP supply chains and related effect of WFP policies
- From data to **policy proposals**



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## NWFP (scientific) definition

NWFP are *“all biological materials other than timber which are **extracted from forest** for **human use**”* - (De Beer and McDermott 1989)

NWFP are *“**products** of **biological origin** other than **wood** derived **from forests**, other **wooded land** and **trees outside forests**”* - (FAO 1999)



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## Wild Product (legal) definition

“**primary production**” means the production, rearing or growing of primary products including harvesting, milking and farmed animal production prior to slaughter. It also includes hunting and fishing and the **harvesting** of **wild products**. (Art. 3, part 17, Reg. 178/02)

"**wild product**" resulting from "**collection of edible plants and parts thereof, growing naturally in natural areas, forests and agricultural areas**" (Art. 12, comma 2, Reg. 834/07 “organic law”)



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## Wild Forest Product: a definition proposal

“**wild forest product**” is an “**edible** (or **useful**) **plant or mushroom and parts thereof**, for human consumption, which **grow naturally in forests** and are **not cultivated using agricultural methods**, but **collected where it carries out its biological cycle**”.

Definition adapted from:

- Art. 12, comma 2, Reg. 834/07 “organic law”
- Bio Suisse (2014)



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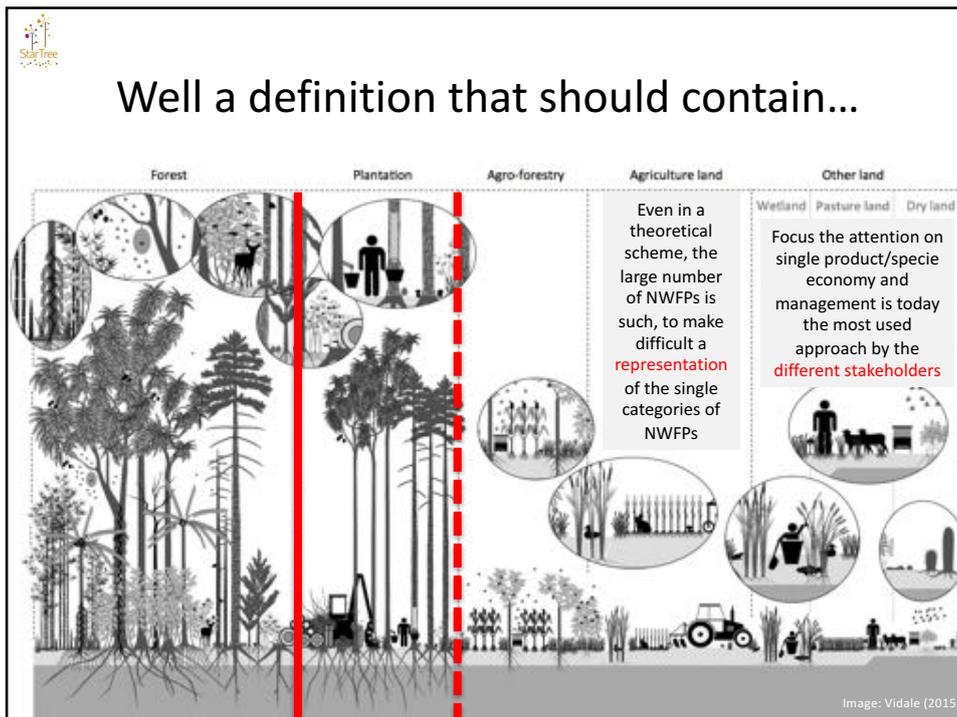
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### Wild Forest Product: a definition proposal

The **ecological position** of each WFP is strictly linked to the property and **harvesting rights**

The main **activity** needed to obtain the WFP is crucial to understand the **fiscal system** the picker is subjected

There might be several other ways to classify WFP, but we need to link "a potential economic action" into an **economic system** in which the picker generate profit and they are taxed as any other economic activity

| Ecological position                                      | NWFP category                            | NWFP types                             | NWFP           | WFP                    | HS Codes                  |                        |
|--|--|--|----------------|------------------------|---------------------------|------------------------|
| Products of the stem, leaves or tree reproductive system | Stem-based Products (tree is cut)        | Christmas tree                         | yes            | no                     | Main activity: cutting    |                        |
|  |  | Fibre                                  | yes            | no                     |                           |                        |
|  | Extracted from tree (tree is kept alive) | bio-refining                           | yes            | no                     | Main activity: extraction |                        |
|  |  | Tar                                    | yes            | no                     |                           |                        |
|  |  | Tannins                                | yes            | no                     |                           |                        |
|  |  | Sorbitol & mannitol                    | yes            | no                     |                           |                        |
|  |  | Sap                                    | yes            | no                     |                           |                        |
|  |  | Natural gums and resins                | yes            | no                     |                           |                        |
|  | Bark and cork (tree is kept alive)       | Bark products                          | Exudates       | yes                    | no                        | Main activity: picking |
|  |  |  | Essential oils | yes                    | no                        |                        |
| Leaf based products (branches are removed from the tree) |  | Phytochemical                          | yes            | no                     |                           |                        |
|  |  | Pigments                               | yes            | no                     |                           |                        |
| Fruits & flowers   | Foliage                                  | yes                                    | yes            | Main activity: picking |                           |                        |
|  | Tree flowers                             | yes                                    | yes            |                        |                           |                        |
|  | Fruits                                   | yes                                    | yes            |                        |                           |                        |
| Tree dependent product                                   | Wild fungi                               | Edible nuts                            | yes            | yes                    | Main activity: picking    |                        |
|  |  | Wild mushrooms                         | yes            | yes                    |                           |                        |
|  | Truffle                                  | yes                                    | yes            |                        |                           |                        |
| Forest understory products                               | Berries                                  | Honey and Bee Products                 | yes            | yes                    | Main activity: husbandry  |                        |
|  |  | Berries                                | yes            | yes                    |                           |                        |
|  | Forest plants                            | Live tree/plants                       | yes            | yes                    | Main activity: picking    |                        |
|  |  | Medicinal and aromatic plants          | yes            | yes                    |                           |                        |
| Litter   | Mosses & lichens                         | Litter                                 | yes            | no                     | Main activity: dig        |                        |
|  |  | Peat                                   | yes            | no                     |                           |                        |
|  | Peat                                     | yes                                    | no             |                        |                           |                        |
| Animal and animal parts                                  | Wild fish                                | Game meat                              | yes            | no                     | Main activity: hunting    |                        |
|  |  | Live animals                           | yes            | no                     |                           |                        |
|  | Animal parts                             | Animal parts                           | yes            | no                     |                           |                        |
|  |  | Insect, amphibious and snails products | yes            | yes                    |                           |                        |
|  |  |  |                |                        | Main activity: picking    |                        |

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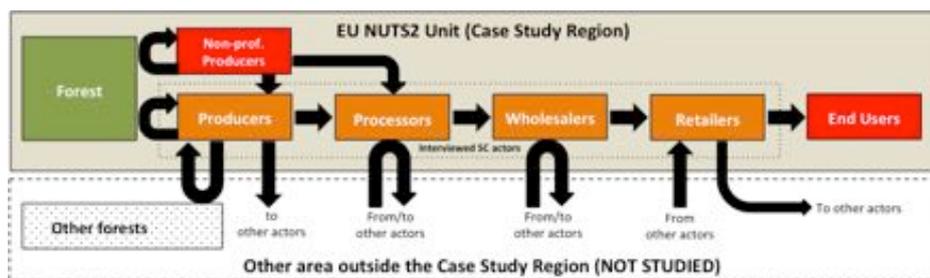
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## Design an approach beyond a research question



|                   |   |
|-------------------|---|
| <b>Producer</b>   | An economic actor who gathers NWFP from forestland for commercial purposes (in NWFP supply chain, the producer is also known as commercial picker). A picker is a person who gathers NWFP in the forest, and it can be considered a producer if it sells its harvest for commercial purposes. |
| <b>Processor</b>  | An economic actor involved in the NWFP supply chain that purchases raw or semi-processed NWFP to transform them into a final or semi-finished product.  |
| <b>Wholesaler</b> | An intermediary actor along the supply chain that links two or more actors at different level.  |
| <b>Retailer</b>   | The actor of the NWFP supply-chain that sells goods to the end user (restaurants are a particular type of retailers).   |

Similar to approach used by Sathre (2009) → from supplier to consumer

## Variables collected

| Level     | Performance metrics                                   | F | N-F |
|-----------|---|---|-----|
| Strategic | <b>Selling price</b>                                  | X | X   |
|           | Total supply chain cycle time                         |   | X   |
|           | Total cash flow time                                  | X | X   |
|           | Customer query time                                   | X | X   |
|           | Level of customer perceived value of product          |   | X   |
|           | Net profit vs. productivity ratio                     | X |     |
|           | Rate of return on investment                          | X |     |
|           | Range of product and services                         |   | X   |
|           | Variations against budget                             | X |     |
|           | Order lead time                                       |   | X   |
|           | Flexibility of service systems to meet customer needs |   | X   |
|           | Buyer-supplier partnership level                      | X | X   |
|           | Supplier lead time against industry norm              |   | X   |
|           | Level of supplier's defect free deliveries            |   | X   |
|           | Delivery lead time                                    |   | X   |
|           | Delivery performance                                  | X | X   |
|           | Level and degree of buyer- supplier partnership       | X | X   |
|           | <b>Product/service variety</b>                        |   | X   |
|           | Perceived quality                                     |   | X   |
|           | <b>Value added</b>                                    | X | X   |





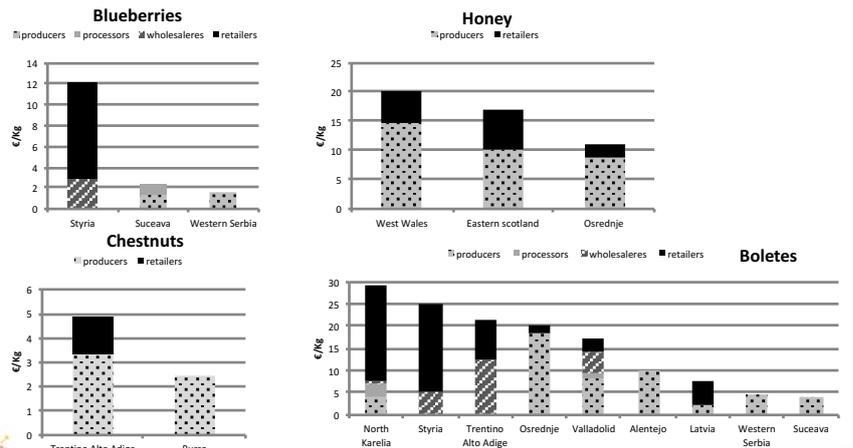
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## Examples of added value and selling price







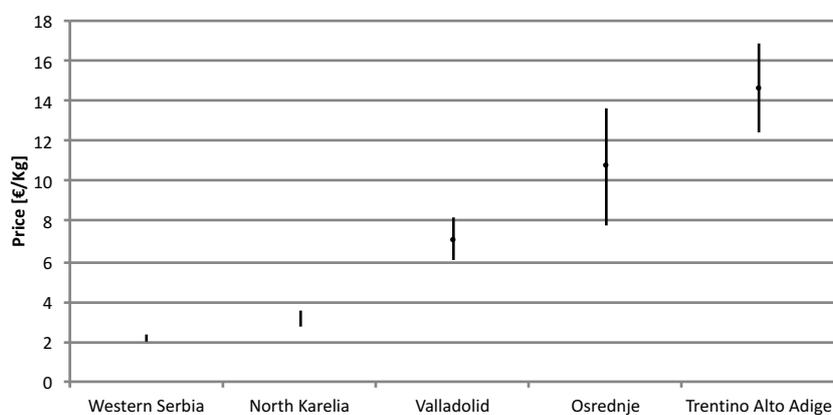
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## Examples of WM pickers selling price



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## Example of regional informal market

| CSR            | Product   | Formal market (Q4.a) |                |                    | Informal market (Q4.b) |                |                    | Min Inf/form [%] | Max Inf/form [%] | Aver. Inf/form [%] |
|----------------|-----------|----------------------|----------------|--------------------|------------------------|----------------|--------------------|------------------|------------------|--------------------|
|                |           | Min production       | Max production | Average production | Min production         | Max production | Average production |                  |                  |                    |
| Valladolid     | WM cep    |                      |                | 35                 |                        |                |                    |                  |                  |                    |
| Catalonia      | WM cep    | 100                  | 500            | 300                | 100                    | 500            | 300                | 100%             | 100%             | 100%               |
| Western Serbia | WM cep    | 76                   | 692            | 330                |                        |                |                    |                  |                  |                    |
| Osrednje       | WM cep    | 100                  | 500            | 250                | 350                    | 950            | 650                | 350%             | 190%             | 260%               |
| Suceava        | WM cep    | 284                  | 518            | 376                | 100                    | 178            | 139                | 35%              | 34%              | 37%                |
| TAA            | WM cep    | 2                    | 50             | 20                 | 4                      | 100            | 40                 | 200%             | 200%             | 200%               |
| North Karelia  | Chaga     |                      | 2              |                    | 1                      | 3              | 2                  |                  | 150%             |                    |
| Bursa          | Chestnuts | 293                  | 444            | 369                | 1679                   | 3071           | 2375               | 573%             | 691%             | 644%               |

The taxonomy of informal markets is reported in D3.4.



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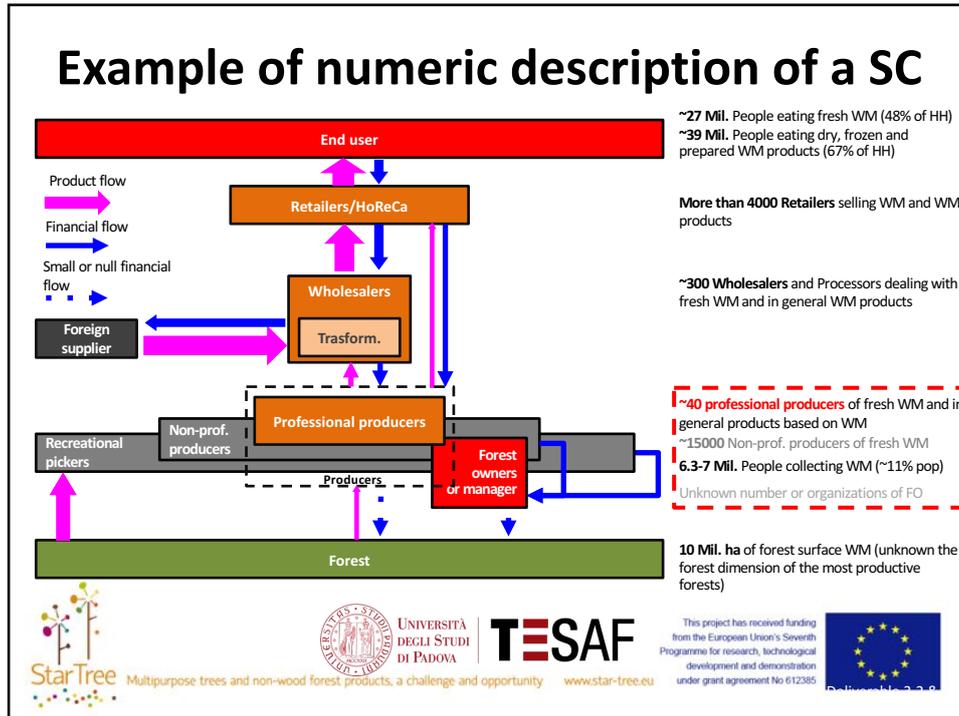


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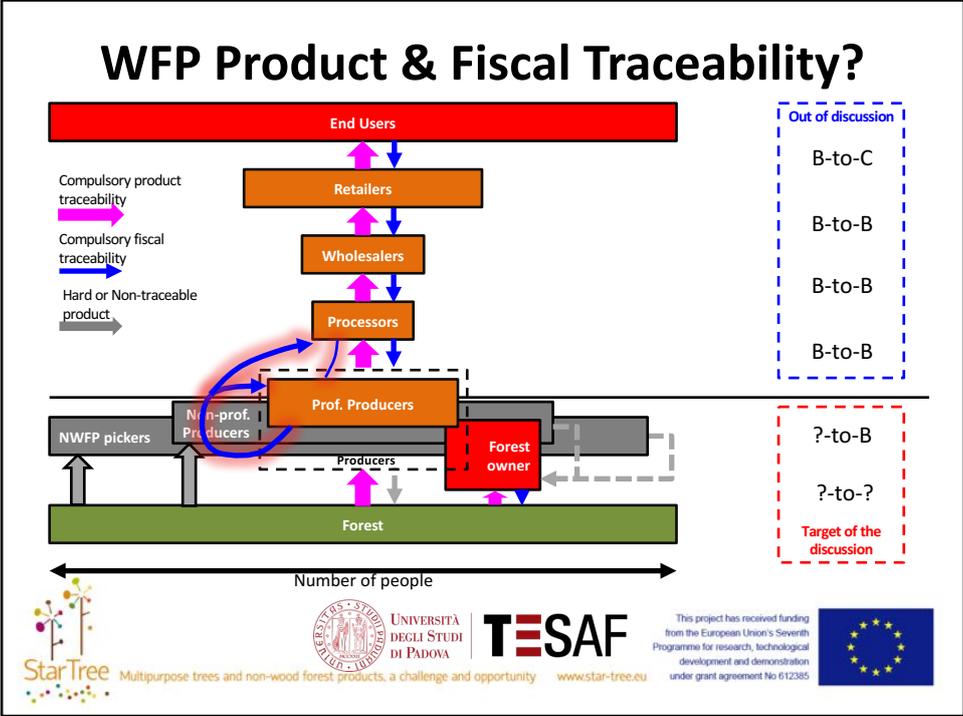
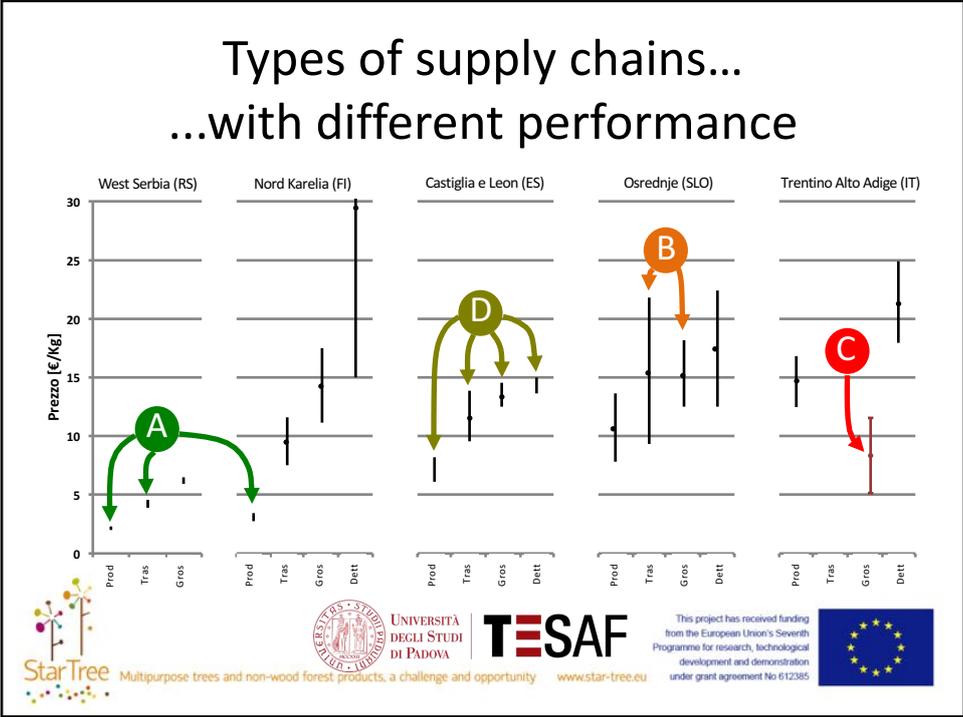
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## (Food) Traceability

(where & how the product comes/goes + who is who)

- The Art. 18 of the Reg. 178/2002 stated:
  1. The **traceability of food**, [...] and any other substance intended to be, or expected to be, incorporated into a food [...] shall be **established at all stages of production, processing and distribution.**
  2. Food [...] business operators shall be able to identify any person from whom [...] for [...] on [...] been
  3. [...] t [...] supplied [...]
  4. Food [...] which is placed on the market [...] in the Community shall be adequately **labelled** or identified to facilitate its **traceability**, through relevant documentation or information in accordance with the relevant requirements of more specific provisions.

Basically almost NONE of the companies meet the regulation requirement






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## (Fiscal) Traceability

(who should pay VAT)

- Two problems:
  - Annex VII of the Dir. 2006/112/CE does not mention the collection of *“wild plants”*
  - Each tax relief
    - S [...] f [...] t
    - The problem is if to consider or not VAT as eligible
    - The WFP farmer has a low level taxation, while the WFP picker is taxed according to trader or artisan fiscality

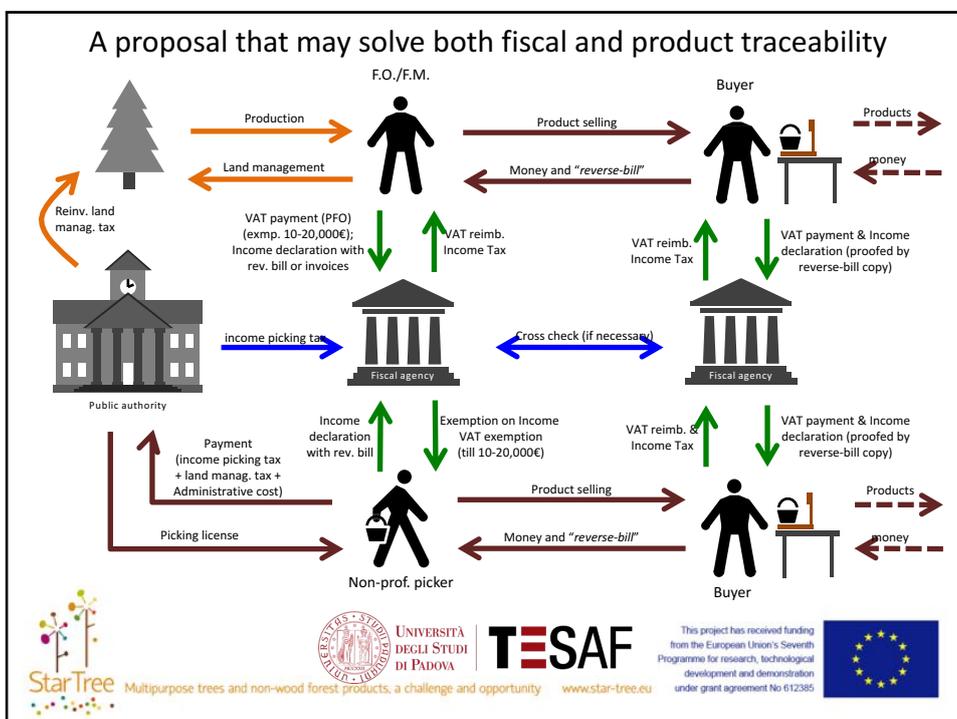
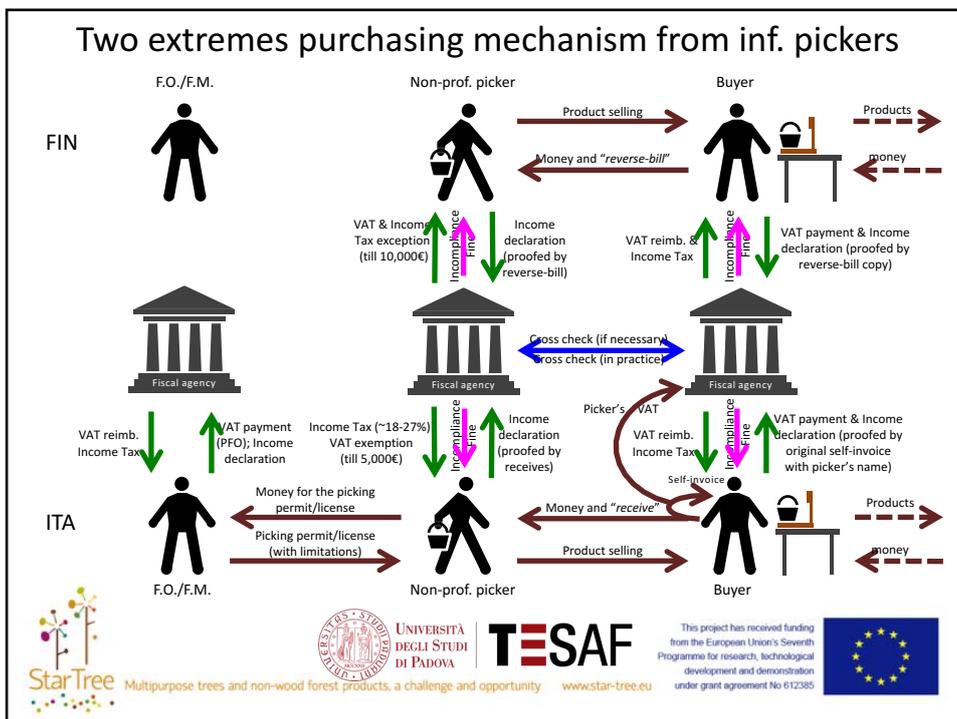
If you get an extra income paid in cash, it is unlikely the picker will declare it in the annual income declaration (realistic view)






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## Conclusions

- WFP production is linked to a large number of **informal producers** that supply formal activities
- Property and harvesting rights must be **design** according the **economic system** they are implemented, because they may affect:
  - structure of the supply chain and the related added value created
  - Fiscal revenue of the state
  - Source of money to be reinvested in forest
- Generate income in remote rural area has **much higher risks** compared to a traditional farm production and it should be reflected in a lower income taxation
- Laws are not static! We should not be **afraid** on changes if we are able to assess positive and negative impacts...Are we in the right moment?



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