



**Citation:** Roberto Cagliero, Giampiero Mazzocchi, Alessandro Monteleone, Fabio Pierangeli, Pietro Manzoni di Chiosca, Elio Romano (2022) A participative methodology for prioritising intervention logic in the design of the Italian CAP Strategic Plan. *Italian Review of Agricultural Economics* 77(3): 25-40. DOI: 10.36253/rea-13717

**Received:** June 13, 2022

**Revised:** October 11, 2022

**Accepted:** October 11, 2022

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**Data Availability Statement:** All relevant data are within the paper and its Supporting Information files.

**Competing Interests:** The Author(s) declare(s) no conflict of interest.

Research article

## A participative methodology for prioritising intervention logic in the design of the Italian CAP Strategic Plan

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**Abstract.** The new CAP implementation model requires each Member State to design a CAP Strategic Plan (CSP) to deliver operational actions under the two CAP pillars. Each CSP must be built from an evidence-based needs assessment that undergoes rigorous prioritisation to plan comprehensive and achievable interventions. In Italy, the institutional context requires all the Regions and Autonomous Provinces to express their preferences and to discuss the CSP collectively, both as regards identifying territorial needs and their prioritisation. In this framework, it became pertinent to introduce a specific instrument to facilitate participation in this process. The Italian Ministry, in collaboration with the National Rural Network, developed a participatory route to assess the prioritisation of the identified needs, to support the decision-making process in CSP drafting process. The process is primarily based on a voting aggregation technique called the Constrained Cumulative Voting method. The process identified makes it possible, on the one hand, to formulate a shared consensus on the level of importance of each need; on the other one, via the definition of natural breaks, to determine homogeneous groups of needs by importance of intervention. This process is in line with the European Commission's legislative proposals requiring a sound and well-founded logic of intervention.

**Keywords:** CAP, CSP, needs, prioritisation, governance arrangements.

**JEL codes:** Q18, O21, D7.

### HIGHLIGHTS

- The process to define the CAP Strategic Plans for 2023-2027 requires Member States to identify territorial needs in a very participatory way.
- The National Rural Network proposed a well-structured, comprehensive and highly participatory prioritisation route, based on the Constrained Cumulative Voting method.
- The results of the prioritisation process were collectively discussed, evaluated and emended, and a final list of the priority levels was defined with a clear level of polarisation.

## 1. INTRODUCTION

The implementation of the Common Agricultural Policy (CAP) is structured around a New Delivery Model based on the CAP Strategic Plans (CSP), developed by EU Member States (MS). As stated in the new regulations, each MS must design a single plan following 9 specified objectives (Fair Income; Competitiveness; Food Value Chain; Climate Change; Environmental Care; Landscapes; Generational Renewal; Rural Areas; Food Health), from three General Objectives (economic, environmental, and social) (GO), plus one cross-cutting objective on knowledge and innovation (AKIS) (reg. (EU) 2021/2115, art. 6). The CSP is intended to offer MSs greater manoeuvrability to respond to their specific territorial needs and contexts; some experts (Carey 2019, Matthews, 2021, Cagliero *et al.*, 2021) suggest that this is the most crucial element contained in the new CAP regulations adopted in December 2021. The transfer of relevant responsibility to MSs allows them to design their own strategies to address specific national challenges, while still complying with objectives defined on an EU level.

This challenge requires the establishment of a consistent intervention logic, defined in the European Commission's Better Regulation Guidelines as «the logical link between the problem that needs to be tackled (or the objective that needs to be pursued), the underlying drivers of the problem, and the available policy options (or the EU actions actually taken) to address the problem or achieve the objective». It involves implementing a very robust process when it comes to designing the CSP: (i) diagnostic and context analysis, (ii) SWOT analysis and territorial needs assessment, (iii) prioritisation of needs, and (iv) the establishment of a strategy to integrate interventions and the set of targets (Carey, 2019). All the steps must be adequately defined using clear and transparent methods and the use of participatory approaches is recommended (Matthews, 2021; Erjavec *et al.*, 2018).

The introduction of a single plan represents a particularly significant challenge in countries where agricultural issues are decentralised to regional authorities. Indeed, several Member States constitutionally delegate their competencies over agriculture and rural development to subnational entities; in Italy, for example, the Regions and Autonomous Provinces (RAPs) hold several, fundamental competencies in agriculture and rural development. In the 2014-2022 planning period, the implementation of rural development strategies, i.e. the second pillar of the CAP, was structured as follows: 22 Rural Development Plans (RDPs) – one covering the national level and 21 regional or provincial – and a Rural Network Plan.

The Italian route to define an intervention strategy began in 2019, when the Ministry of Agriculture, Food and Forestry Policies (MIPAAF) launched a joint process with the RAPs. The aim was to assess context analysis as a diagnostic phase, with the technical support of the National Rural Network (NRN). Ten Policy Briefs related to the 9 EU-specific objectives and the AKIS objective were drafted and discussed in various technical meetings with the RAPs.<sup>1</sup> Consultation with economic and social partners and civil society stakeholders was also initiated in this phase. The consequent elaboration of SWOT matrices aimed to provide narrative synthesis of the Policy Briefs, but also to be consistent with the experience gained during the 2014-2022 planning period. Useful indications for the improvement of the Policy Briefs and SWOT matrices were provided during the technical meeting with the Commission's GeoHub (Pierangeli, 2020). The identification of the first list of 50 needs was conducted by NRN experts and discussed, in several rounds, with the RAPs (Angeli *et al.*, 2020).<sup>2</sup>

Based on these steps, Italy developed a specific, highly participative process for assigning different levels of priority to the identified territorial needs, starting from a Cumulative Voting (CV) approach. Cumulative Voting is a simple and transparent method for prioritising a list of items and, according to the literature, offers several advantages. It allows for a high rate of participation among stakeholders and the possibility of clustering results, rather than merely providing a list of priority values. Using the literature available, NRN experts developed a specific field-tested model of the technique, known as Constrained Cumulative Voting (CCV), to address the common weaknesses of the CV techniques and to cope with constraints arising from the COVID-19 pandemic. In addition, to make the results of the voting process more manageable and effective, they were aggregated into priority bands, through a clustering procedure (Jenks optimisation).

The results of the application of CCV were very positive and it was able to polarise the priority of needs as expected. These results were compared with the outcomes of a consultation phase with the stakeholders (Partnership). This comparison procedure supported and confirmed the outcomes of the application of CCV and made it possible to define the final framework for the priority bands of territorial needs that could subsequently be applied to the future CSP in Italy.

This participative approach is particularly unique because it also involved the RAPs and the Partnership

<sup>1</sup> [https://www.reterurale.it/PAC\\_2023\\_27/PolicyBrief](https://www.reterurale.it/PAC_2023_27/PolicyBrief)

<sup>2</sup> <https://www.reterurale.it/flex/cm/pages/ServeAttachment.php/L/IT/D/a%252F1%252F9%252FD.6c3376f87cf067a519f9/P/BLOB%3AID%3D23075/E/pdf>

Fig. 1. The Route to Validate the Needs and Priorities Assessed in Italy, by the Main Phases.

Phase	Steps	Method	Months
Phase A	Step A.1 - The RAPs are called to express the degree of priority of the listed needs, split into altimetric areas (plain, hill, mountain)	Cumulative Constrained Voting	May/June 2021
	Step A.2 - NRN experts processed the individual indications vector into a consensus matrix, according into four qualitative levels: Strategic, Qualifying, Complementary, Specific.	Jenks natural breaks classification method	July 2021
	Step A.3 - Overall validation of the aggregation process of individual indications in the common consensus matrix	Traffic light	August/September 2021
Phase B	Step B.1 - The members of CSP partnership are asked to fill a simplified online format for voting the same initial list of needs submitted to RAPs	Online voting	Early October 2021
	Step B.2 - NRN experts processed the votes to identify and compose the overall level of prioritization as expressed by the Partnership into four qualitative levels	Modal attribution	End of October 2021
Phase C	Step C.1- NRN experts cross-checked the two result matrices, highlighting the major differences, to define a common, definitive matrix	Gap and Discrepancy Analysis	Early November 2021
	Step C.2 - Final validation of needs and priorities with the RAPs	Plenary discussion	End of November 2021

in the prioritisation process, while other regionalised Member States have predominantly used desk research techniques, applying multi-criteria methodologies. For this reason, the aim of the article is to describe the process and discuss the outcomes of the needs prioritisation phase in Italy.

## 2. THE PARTICIPATORY ROUTE TO PRIORITISING CSP NEEDS IN ITALY

Since 2019, the Italian Ministry has been developing an approach that would coherently combine CSP intervention logic with EU indications, in line with the four steps mentioned above: (i) context analysis, (ii) SWOT analysis and territorial needs assessment, (iii) prioritisation of needs, and (iv) the establishment of the CSP strategy. Other regionalised Member States, such as Spain, Portugal and France, followed a similar path: they used a participative approach up to the needs assessment step, while for needs prioritisation, they used desk research approaches, often built on multicriteria analy-

ses, to define priority bands.<sup>3</sup> In compliance with the European Code of Conduct for Partnerships (Commission Delegated Regulation (EU) 240/2014), Italy opted to maintain a highly participative approach in the prioritisation step. The Ministry initiated a particularly unique approach, made up of various phases to create what is called the needs prioritisation route. A thematic working group, comprised of NRN analysts, identified the iterative process supporting the MIPAAF, the RAPs and the stakeholders in expressing a shared assessment of the prioritisation of the various items identified in the diagnostic process. The process is intended to involve and allow for feedback from stakeholders through various mechanisms, ensuring the involvement of a broad partnership and the active participation of actors with mandates on agriculture.

The prioritisation route was composed of three phases (Fig. 1): the first (Phase A), involved the Italian RAPs to define needs and priority levels based on a participatory cumulative voting approach; the second

<sup>3</sup> In Spain and Portugal, territorial needs are classified using a code system (+++; ++; +), while in France, they use “PSN indispensable; PSN utile; PSN pas indispensable”.

(Phase B), involved the Partnership for CAP 2023-2027, with the aim of consulting partners and refining the picture emerged from Phase A; the third (Phase C), provided the final definition of the priority levels for each of the needs identified, by comparing and merging the results obtained from phases A and B.

#### *Phase A: The Technical Feedback from the RAPs*

The first phase of the prioritisation process was focused on the technical exercise carried out with the RAPs, stimulating a collective discussion to define and share the different levels of importance of the 50 needs identified from the context analysis, specified for each altimetric area (plain, hill and mountain).

In a two-stage selection process with feedback adjustment (Tang *et al.*, 2020), RAPs were called to express the degree of priority of the common needs in a constrained voting framework that led to the first list of prioritised needs. The voting mechanism allowed simplicity of application, flexibility and remote manageability. This aspect was particularly important, as the CAP planning phase took place during the period in which the restrictions on travel and in-person meetings due to the COVID-19 pandemic were particularly strict (Cagliero *et al.*, 2021). The result of this step was the collection of priority indications in cardinal terms by the participants.

Next, we proceeded to aggregate the individual indications gathered. To avoid rigid, ineffective cardinal ranking, while favouring a usable indication of priorities, we provided a priority bands scheme restitution of the overall aggregated matrix. Since it is crucial to obtain «clear break points that show which are the obvious high-priority items» (Dennison, 2000), we transformed the numerical indications for each need into qualitative levels or bands, via the Jenks natural breaks classification method. The Jenks optimisation is a common classification technique based on a K-means approach to define the minimum distance between data and the centre of a class, as well as the maximum distance between class centres (Mac Carron *et al.*, 2016; Khan, 2012). This means reducing the variance within every band and it maximises the variance between the bands. By extension, in this study, we set a priori four bands to subdivide the territorial needs and we applied the Jenks optimisation with an R software routine by altimetry. The qualifications for the different priority bands have been set as follows (Mazzocchi *et al.*, 2021):

- **Strategic:** these priorities lie at the heart of the strategy and should involve both specific actions and comprehensive approaches that also synergistically address other needs;

- **Qualifying:** these priorities refer to enabling areas of intervention to make effective responses to other needs, in particular, strategic needs;
- **Complementary:** these priorities refer to spheres of intervention that synergistically complement strategic needs; they are not technically less relevant, merely more specific, of an enabling nature;
- **Specific:** to increase the effectiveness of the process, but with specific relevance to the Strategic Plan.

Once the first draft of the national matrix was defined, the feedback stage was conducted to reduce or eliminate inconsistency or dissatisfaction of individual participants with the overall grade. The measurement of consensus can be read as the deviation between the individual and the collective preference matrix and, despite the fact that decision-makers do not often easily accept a feedback mechanism, any contentious issues must be clearly identified and addressed (Wu *et al.*, 2018; Gu *et al.*, 2021). The RAPs were then called to discuss the overall estimated picture and they could confirm or propose a change in the priority levels allocated in the aggregative process conducted by NRN experts.

This feedback mechanism is based on a colour-coded voting system (Gibbons, 2019; Dennison, 2000), similar to a traffic light. The RAPs were asked to review each need and given the option to indicate if they agreed with its allocated priority band or believed it should be revised, using a system of coloured dots: GREEN = increase to the next priority level; WHITE = the level is correct; RED = reduce priority by one level. This step was conducted by applying a criterion of consistency in the observations and proposals. A change in priority levels was accepted when the proposed change was sufficiently represented in the overall tally of votes both in terms of number of votes and the direction (up or down by one level) of the change. In practice, this meant that at least one-third of the participants had requested an amendment to the priority assigned to a particular need and with a similar indication in the change to priority band (either increasing or decreasing).

#### *Phase B: The Consultative Phase with the Partnership*

From the outset, the MIPAAF initiated an open and collaborative discussion with the representatives of the competent institutions and environmental and socio-economic sectors, in line with reg. (EU) 240/2014. The Ministry has set up a specific Partnership, composed of representatives of the stakeholders (public authorities, economic, environmental, and social actors). The Partnership was asked to express its assessment of the prior-

ity levels of the needs by altitude (plain, hill, mountain).<sup>4</sup> The participants were asked to fill out an online questionnaire through which they could assign the possible priority levels for the 50 priorities. They were given the option to include qualitative comments in a separate section; this qualitative information mainly concerned specific territorial aspects and was organised by theme. All feedback was processed by the NRN experts, to identify the level of prioritisation as expressed by the Partnership for each need by altimetric area, under the four labels used by the RAPs (Strategic; Qualifying; Complementary; Specific). The most critical issue was the determination of an unambiguous level of priorities, while the indications gathered were in several cases discordant or not sufficiently polarised. The aggregation mechanism started from the modal value of the votes. The attribution in a priority band was set as follows: (i) at least 3/4 of the votes indicates the same priority level, (ii) if two votes represent together at least 2/3 of the tally votes, we attributed the priority level most voted between them.

#### *Phase C: Recomposition of the Prioritisation Indications*

The final phase was to collate the indications deriving from the two stages described above. NRN researchers crosschecked and compared the levels attributed by the RAPs, deriving from the CVV application, and those that emerged from the Partnership's indications, to validate the RAPs priority bands and compile an overall assessment.

As already described, the approach was primarily to maintain the attribution resulting from the technical path in Phase A. In this light, the RAPs' indications were confirmed in two different cases: (i) where the stakeholders' consultation led to a minor difference in votes, i.e., a difference of only one priority band level, (ii) where stakeholder consultation did not indicate a univocal assessment. On the other hand, where there was evident discordance, a revision of the priority band – limited to one level – was proposed and discussed again with the RAPs; e.g., if a Strategic band was indicated by the RAPs, but the Partnership assigned the Complementary band, we proposed the final Qualifying level.

During the discussion in Phase C, modifying the description and the labelling of certain needs was taken into consideration, but only in a very limited way, less than five needs. Following this, based on the discussion held and the elements collected, NRN experts were able to draw up a conclusive list of final needs and the relative priority levels by GO and altitude.

### 3. THE CONSTRAINED CUMULATIVE VOTING TECHNIQUE: A THEORETICAL BACKGROUND

#### *Prioritisation Processes through Participatory Approaches: the Cumulative Voting Technique*

The key challenge for using participatory approaches in prioritisation processes is to find a suitable way of deriving a collective preference vector from individual choices and of reaching a consensus (Tang *et al.*, 2020). Consensus-building processes among different stakeholders representing different economic, social, environmental interests and cultural values typically involve voting procedures by which to infer collective choice from individual preferences (Marcatto, 2021). Approaches based on prioritised decision-making do not result in a single chosen alternative, since they produce a list of options ranked from most to least important, where the ranking represents the preferences of an individual relative to other available options. More formal prioritisation processes are typically associated with working groups (“group prioritisation”), where multiple priorities from various individuals must be combined into a single priority list, as is required for the CSP. Cagliero *et al.* (2021) explored the main prioritisation taxonomies, as shown in Table 1, and highlighted the advantages and weaknesses of adopting a Cumulative Voting technique (Tab. 2).

CV is a simple and transparent method to prioritise a list of items. Each participant is given the same number of votes/points/dots to be allocated among a given number of options undergoing prioritisation (Vestola, 2010): the more points you give an option, the more its relevance in terms of priority increases. CV is generally considered an appropriate method for conducting prioritisation sessions, including those involving multiple stakeholders (Tufail *et al.*, 2019). It is easy to use and it allows voting with fine-grained information on voter preference intensity. The main benefit is CV's ability to handle many items with many participants.

However, there are some caveats worth mentioning. Used in a very basic form, CV presents some limits linked to tactical voting and is susceptible to “shrewd tactics” (Vestola, 2010), as indicated in Table 2. For example, if a stakeholder expects others to spread their points among many items, then s/he may assign all her/his points to one specific item in order to elevate its relevance on the aggregate priority list (called *plumping*). Although meeting face-to-face is useful for stimulating discussion, the practice of in-person CV entails certain risks, such as authority bias or HiPPO effects (i.e. participants assign a higher priority following the most influential group member), or bandwagon effects,

<sup>4</sup> [https://www.reterurale.it/PAC\\_2023\\_27/TavolodiPartenariato](https://www.reterurale.it/PAC_2023_27/TavolodiPartenariato)

**Tab. 1.** The Main Taxonomies of Prioritisation Methods with a Participatory Approach.

Scale	Examples	Complexity	Ease of use	Accuracy	Statistics
Nominal scale	Top 10	Very easy	Yes	Yes	Mode and chi-square
	MoSCoW	Easy	Yes	No	
	Numerical assignment	Easy	Yes	Yes	
Ordinal scale	Ranking	Easy	N/A	N/A	Median and percentile
	Game Planning	Easy	Yes	Yes	
	Wieger's Method (WM)	Complex	Yes	Yes	
Interval scale	Requirement Uncertainty Prioritisation Approach (RUPA)	Complex	N/A	N/A	Mean, st. dev., correlation, regression, variance
	Value-oriented prioritisation	Complex	Yes	Yes	
Ratio scale	Analytic Hierarchy Process (AHP)	Very Complex	Yes	Yes	All forms
	Cost-value ranking	Easy	Yes	No	
	Cumulative Voting (CV; 100\$)	Complex	Yes	Yes	

Source: Cagliero *et al.*, 2021.

**Tab. 2.** The Main Aspects of the Cumulative Voting Technique.

Strengths	Weaknesses/threats
It is a quick and easy way to prioritise a long list of options.	Too many options can be overwhelming (overchoice) and undermine the polarisation of indications.
It requires a clear choice to be made and does not involve vague or uninformed behaviour.	It is not possible to add new options once the process has started.
It allows participants to express a preference for more than one option at the same time.	Similar or related options are penalised (vote splitting).
It creates a sense of commitment and allows participants to be active in the decision-making process.	Participants may adopt opportunistic attitudes (shrewd tactics).
It allows for a cumulative and simple system of analysis of results.	There is a risk of bandwagon and HiPPO effects (leaders can influence the opinions of the group)
It has several possibilities for adaptation (sub-groups, different rounds, use of monetary values, ...).	It may not be possible to highlight whether an outcome represents a broad consensus or not; because of excessive dispersion or too much focus on votes.
Main Application Fields	Attention Points/Customisations
It is particularly useful for reaching a collective consensus with a large group of participants and a high risk of disagreement.	It is suitable for focusing the discussion on a subset of alternatives within a very broad set.
It is particularly useful for choosing between several potential options.	It is necessary in order to reach a group decision within an acceptable time frame (potentially as short as possible).
It is particularly useful for narrowing down a policy design.	It is necessary in order to favour the anonymisation of votes and non-sharing of partial results.
It is particularly useful for classifying arguments to be discussed.	It is useful for randomising the voting procedure.
It is particularly useful for gathering information to create a priority matrix.	It is useful for applying software tools for remote voting, instead of face-to-face meetings (in particular, as regards the COVID-19 pandemic).

Source: Mazzocchi *et al.*, 2021

where participants voting later are more inclined to vote for an alternative that had been previously voted for by others (Asch, 1951; Kohavi, *et al.*, 2007; Nadeau *et al.*, 1993) In addition, CV requires some cognitive effort when used for lists with many options. However,

according to some authors (Skowron *et al.*, 2021; Mazzocchi *et al.*, 2021), the gains in expressiveness outweigh the cognitive burden and the well-known and aforementioned disadvantages.

### The Proposal of the Constrained Cumulative Voting Technique

To overcome the critical issues reported, Cagliero *et al.* (2021) tested and proposed a strengthened version, as compared to the basic application of the method, called Constrained Cumulative Voting. Based on the CSP regulation requirements (reg. (EU) 2021/2115), the process aims to be:

- transparent, both in the expression of individual preferences and the computation of the final aggregation;
- easy to understand and execute, thus, avoiding being a burden;
- software-based, so that various participants can take part remotely as/when required;
- flexible enough to be used with small, medium and large sets of items to be prioritised and by the required number of participants;
- able to run iteratively, in the case of using multiple rounds to refine evaluations, as well as limiting time-wasting in the process.

The final determination of the voting model took place after two rounds of testing on different formulations, both in terms of the number of votes and the weighted values for votes, with the collaboration of NRN regional experts. The improved model contains some upgrades to the standard CV technique: it is software-based, it counts non-fixed votes and it enhances the ability to explain prioritisation variability. From an operational point of view, the CCV runs on a Microsoft® Excel® application and includes five spreadsheets, containing the needs related to each General Objective, plus the AKIS transversal objective and a summary sheet containing an overview of the values allocated for each need.

We proposed a specific voting format, including different weights of votes to compile individual preference vectors to then be aggregated into a collective preference

vector (Tang *et al.*, 2020). This voting shape is characterised by a very limited quantity of high-value votes, to simplify the process and nudge voters towards the clear polarisation of options (Achimugu *et al.*, 2014). Following Amrhein (Amrhein, 2019), the definition of the number of votes was assigned based on the following relationship:

$$N = \frac{[(T/2) * T]}{P} \quad (1)$$

where T is the number of issues or topics, in the present analysis the number of territorial needs, P is the number of participants and N is the number of dots required for each person. For the testing phase, we considered 50 needs to be prioritised and 23 voters (one per each of the 22 RPDs and the NRN Plan), thus the number of dots was estimated as 50-55 votes for each participant. The form of the *voting portfolio* was: 5 dots of value 10, 7 of value 5, 35 of value 1. Each participant had to distribute the full amount of 50 votes by geographical level, i.e.: 120 points for the plains, 120 for the hills, 120 for the mountains (Fig. 2).

Once the individual levels of prioritisation from participants were gathered, it was possible to compose the overall national picture. This aggregation was carried out by NRN experts, after the single RAPs expressed their indications individually and separately, without potentially knowing each other's intentions as regards voting. The resulting matrix comprises three territorial aggregates (plain, hill and mountain) and is related to CAP objectives.

#### 4. MAIN RESULTS FROM THE PRIORITISATION PHASES

In this section, the results from the phase led with RAPs and consultation of stakeholders are presented.

Fig. 2. The final shape of the voting pattern by number and value (Constrained Cumulative Voting, CCV).



Furthermore, the final definition of needs prioritisation deriving from the merging of the two rounds is shown.

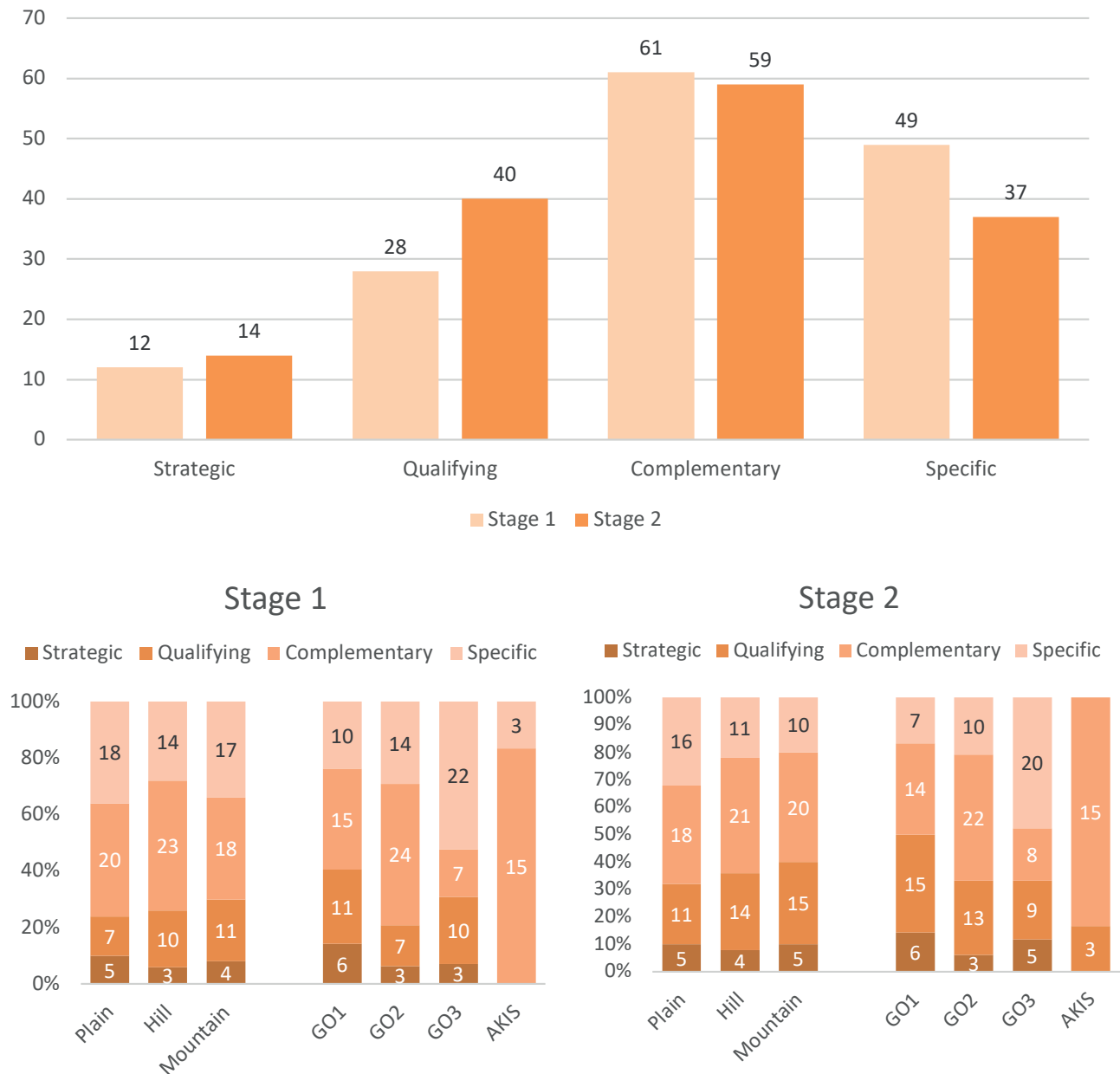
*Phase A: The Indications of the RAPs*

In Figure 3, the results of the prioritisation process conducted with RAPs, via CCV and the Jenks optimisation method, are presented. Stage 1 and Stage 2 represent the two moments before and after the discussion

and review phase with the RAPs in the two-stage selection process.

The results of Stage 1 show the consistent polarisation of allocations, as intended to be achieved with the application of the CVV. Out of the 150 options to be voted on (50 needs for 3 altimetric areas), just over one-tenth were judged to be at the Strategic level, less than a fifth at the Qualifying level, almost 40 per cent at the Complementary level and the remainder at the Specific

**Fig. 3.** The Outcomes of the Technical Phase with RAPs – Phase A (frequency).





level. In terms of altimetry, we can see a slight majority of Strategic level for the lowlands, while for the hills and mountains, there is a higher level of defined Qualifying priorities; however, the distribution of attributes is relatively homogeneous for the three areas. Considering GO, we can see that Strategic priority levels are more present for GO1, Complementary priorities are particularly present for GO2 (environmental issues), while GO3 (rural area issues) is characterised by more Specific needs (52%). For the AKIS objective, only Complementary or Specific levels are indicated. Only three needs are Strategic across all three altimetric areas, one for each GO: Increasing the profitability of farms, agri-food and forestry (GO1); Supporting organic farming and animal husbandry (GO2); Promoting entrepreneurship in rural areas (GO3).

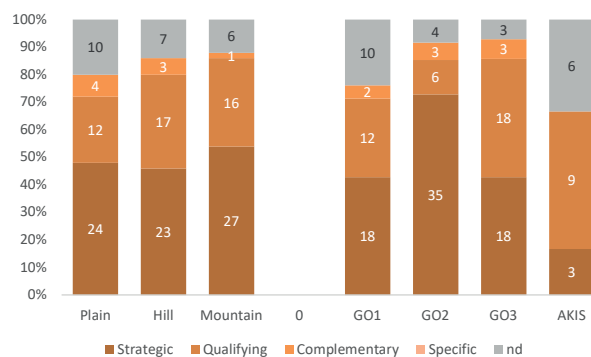
In Stage 2, we applied the mechanism of feedback and adjustment to the outcomes of Stage 1. The RAPs received the overall priority vector by bands, and they could suggest possible changes, by justifying them, if they found a significant distance from their individual priority vectors. Generally, emendations led to a more balanced representation than in Stage 1 and the number of Strategic and Qualifying needs were increased, while Specific needs were reduced. These adjustments cut across all altimetric areas, while they particularly affected the AKIS objective. The new bands for General Objectives confirm the relevance of the Strategic needs for GO1 and confirm the weight of the Complementary needs for GO2. The Strategic needs for GO3 increased and all the AKIS needs became complementary, at the least, although the absence of Strategic needs remained.

#### Phase B: The Partnership's Priority Assignments

Nearly 70 participants responded to the consultation with a proportionate representation of all stakeholders in the CSP drafting process and included in the Partnership, nominated by the MIPAAF (Mazzocchi *et al.*, 2021).

The results of this stakeholder's consultation show that out of the 150 options, half were considered to be Strategic, about one-third Qualifying, the remainder Complementary and none were deemed Specific (Fig. 4). The prevalence of high priority levels was expected, and this is due to the simplified methodological choice not to subject the vote to an overly constrained and technically complex modality. As regards level of altitude, the distribution by priority band seems similar, albeit with some variability, with more than 40% of the needs defined as Strategic for each GO, about one-third as Qualifying and the remainder unclassifiable. In contrast, the

Fig. 4. The Outcomes of the Stakeholder's Consultation - Phase B (frequency).

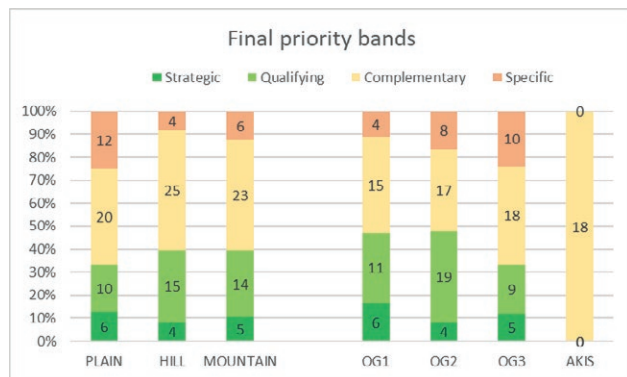


presence of Strategic needs for GO2, i.e., environmental issues, is much more evident than in the other GOs, while for AKIS, Strategic needs are particularly low. Overall, a clear and unambiguous assessment of the level of priority was not possible in almost 15% of the cases.

#### Phase C: The Merging of Feedback from both RAPs and Partnership

The cross-analysis of estimated bands from both RAPs and Partnership revealed cases, albeit not numerous (less than 10%), where the evaluation in the two previous phases diverged considerably. Where the estimations were very discordant, we revised the level of priority, proposing a new attribution. For example, this was the case for a few needs related to rural development and the level of assessment of the needs under the AKIS objective, where a homogeneous Complementary band was proposed. From the qualitative information gathered in all the steps, the necessity to merge some needs emerged, which were indicated as being too similar in the comments of the participants. To avoid the dispersion of the level of priority, we proposed a new interpretation of the needs concerned in an aggregated way. These cases were mostly related to supply chain issues. In summary, 41 needs were confirmed in the priority bands determined from the application of the CCV technique in Phase A. 3 needs were re-evaluated in their priorities, while 6 needs were reformulated and aggregated into 2 needs only. 2 more needs were added to this revised grouping, at the request of the participants: a need specifically dedicated to the sustainable use of phytosanitary products and one concerning the fight against the exploitation of workers. The final number of territorial needs to be addressed by the Italian CSP is, therefore, 48 (Appendix).

**Fig. 5.** The Final Priority Bands from the Prioritisation Route in Italy (frequency).



In Figure 5, we represent the final results of the needs' prioritisation process. The picture confirms the ability of the process to determine an adequate and polarised allocation of priorities.

The most represented priority band is Complementary, for almost half of the needs expressed by altimetry. About one in four needs is held to be Qualifying, while 10% are Strategic and 15% Specific. The attribution of priority bands is substantially homogeneous for the three altimetric areas, even though a greater presence of Specific priorities for the lowlands can be noted. In relation to the General Objectives, a certain homogeneity and balance can be observed but, for GO3, there is the particular presence of the Specific band. As already described, for the horizontal objective AKIS, it was decided to apply the Complementary level for all needs, given the instrumental nature of the issue. For GO1, the need for income support and equity in farm support was highlighted, as well as the need for integration and aggregation, i.e., issues addressed by Pillar 1 interventions (direct payments and market measures). Moreover, the need to modernise the sectors is also particularly high. As regards GO2, the needs related to environmentally-friendly production and breeding methods, sustainable forest management and the sustainable use of plant protection products were highlighted. Finally, the promotion of entrepreneurship in rural areas and the implementation and enhancement of telematics infrastructure were highlighted in GO3.

## 5. DISCUSSION AND MAIN CONCLUSIONS

Italy has identified a participative and sound route in order to define priority bands for the needs to be included in the CSP, based on two central points: a

robust methodology and a high level of participation. The proposed approach presents interesting practices in terms of sharing and review/feedback procedures, especially in reaction to the crisis due to the COVID-19 pandemic, to facilitate the possibilities of interaction. The pandemic emergency profoundly marked the process of prioritising the identified needs for CSPs (Erjavec, 2020) and, in this sense, the NRN experts modified some steps in the analytical phase with remote iteration techniques (Cagliero *et al.*, 2021; Mazzocchi *et al.*, 2021). The publication of all the documentation and presentations made during the diagnostic steps<sup>5</sup> was another important aspect to reinforce the overall transparency of the process. This certainly facilitates the inclusion of all stakeholders in general, not just the competent bodies.

To technically prioritise CSP needs, a two-stage exercise was carried out with the Regions and Autonomous Provinces, aimed at encouraging discussion and sharing the identification of the different relevance levels of the needs under consideration. The Italian proposal, unlike other regionalised Member States, is highly coherent with the participatory and collaborative approach followed in the diagnostic phases, i.e., Policy Briefs, SWOT analyses and the first list of needs. Cumulative Voting is the most common approach used in this type of participatory process and it is a relatively simple technique for assigning levels of priority. It is considered particularly appropriate in the case of collective and participatory decision-making processes, although it shows some weaknesses and the potential risk of skewed outcomes. Following the advice of the literature, the tailored CCV model we adopted is capable of overcoming many of the crucial issues in Cumulative Voting models. The CCV model also made it possible to remotely undertake the participative process during the COVID-19 pandemic. In this light, CCV is an appropriate technique for defining needs prioritisation in the process of creating an intervention logic plan.

The CCV exercise was the crucial step within the prioritising route and was aligned with the overall process implemented by the Italian Ministry of Agriculture. However, it is important to underline that it is not the only way of expressing levels of priority and that it must be accompanied by adequate stakeholder consultation (Matthews, 2021; Erjavec *et al.*, 2018; Cagliero *et al.*, 2021). CCV is primarily a technical instrument rather than political, and it needs to be coupled with other mechanisms to understand and represent the complexity of a prioritisation process in defining the logic of a plan. In this light, an important challenge is how to compare

<sup>5</sup> [https://www.reterurale.it/PAC\\_2023\\_27](https://www.reterurale.it/PAC_2023_27)

and compile the outcomes of different steps of stakeholder consultation.

The results of the entire prioritisation process are of significant interest both as regards descriptive capacity and in operational terms, as they are the basis for the application of the CSP. The resulting picture is adequate to identify the actual needs for CAP support in Italy. The central objective was to determine bands of priority that would allow a polarised and clear distribution of the identified needs, going beyond the determination of a mere ranking. The choice of prioritising the needs by bands and not by a numeric ranking has also been made by other Member States (i.e., Spain or Portugal), but those classifications are based only on a gradient of relevance. In Italy, the priority bands were also aggregated in relation to the different functions and potential synergies of the needs identified. Indeed, to address the relatively small group of Strategic needs, it is necessary to systematically consider their synergy with the more numerous Qualifying Complementary needs. We can say that the CCV model was able to lead to a clear identification, which was subsequently discussed and compared by all the stakeholders at different stages, of a complex scenario, in which the needs to be addressed were related to each other and included in an actual strategic framework.

We are conscious that it is not possible to make a direct comparison between the needs identified for the 2023-2027 and those included in the 2014-2022 RPDs. Indeed, the latter was planned and implemented on a regional basis and concerned only second pillar interventions, while the CSP, which will be drawn up by each Member State, also includes first pillar support. This difference is deeply relevant, but from the analyses made by the NRN during the diagnostic phase, it is possible to draw an estimation of the aggregate priority distribution of the needs of the 2014-2022 RPDs (Cagliero *et al.*, 2021; Mazzocchi *et al.*, 2020). We can appreciate two main outcomes. The first is a consistent level of continuity between the two planning periods in identifying a small but clear group of strategic needs. Second, we appreciate a certain similarity in the overall shape of prioritisation, with a common vision of integration and complementarity.

In defining the CSP, each intervention must be combined with one or more prioritised needs. At the time this article was written, it was not possible to have a consolidated picture of the resources assigned to each intervention. Therefore, it is not possible to provide an assessment of the consistency between priority levels and the actual allocation of resources. This could be the subject of future research, which could also compare the consistency between priority levels and resources assigned in other Member States.

In addition to this, it is important to recognise that the prioritisation process carried out in Italy had the important role of stimulating initial debate on the contents that should be incorporated into the CSP through the various forms of intervention. In fact, in addition to the comparisons that took place on the national institutional tables, each RAP undertook regional paths to identify and evaluate regional priorities, helping to stimulate the debate on the CAP among public administrations and stakeholders. In some RAPs, Regional Partnerships were conducted to identify the priority levels of needs, the results of which were then transmitted to the NRN and fed into the overall national assessment.

This complex approach (a common participative route with several integrated steps) proposed in Italy may answer many of the criticisms against the prioritisation process, as it can provide (1) higher quality in the strategic planning process; (2) robustness of the design of diagnostic phases via a clear prioritisation of needs; (3) transparency of criteria for the future link between measures, needs and targets; and (4) evidence of the steps required to establish a robust intervention logic. Flexibility, transparency and robustness will also be important to handle the new CSP delivery model and its rigidities for setting targets, allocating resources, and constructing a monitoring system. The more the intervention logic can be tailored to specific national and regional needs and conditions, the more the CSP could enhance its efficiency and effectiveness.

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## APPENDIX. LIST OF NEEDS BY GO, ALTIMETRY AND PRIORITY BAND.

General Objective 1: to foster a smart, competitive, resilient and diversified agricultural sector ensuring long-term food security.

1.1 Increase the earnings of agricultural, agri-food and forestry companies	Plain	Strategic
	Hill	Strategic
	Mountain	Strategic
1.2 Promote the market orientation of agricultural companies	Plain	Strategic
	Hill	Qualifying
	Mountain	Qualifying
1.3 Favour income diversification of the agricultural and forestry companies	Plain	Specific
	Hill	Qualifying
	Mountain	Qualifying
1.4 Facilitate the access to credit by agricultural, agri-food and forestry companies	Plain	Complementary
	Hill	Complementary
	Mountain	Complementary
1.5 Reinforce the quality and accessibility to the infrastructure networks	Plain	Specific
	Hill	Qualifying
	Mountain	Qualifying
1.6 Promote processes of integration and aggregation of businesses and the offer	Plain	Strategic
	Hill	Qualifying
	Mountain	Complementary
1.7 Support the creation and consolidation of local supply chains and direct sales channels	Plain	Specific
	Hill	Complementary
	Mountain	Qualifying
1.8 Reinforce the systems of certification, recognised quality and voluntary labelling	Plain	Qualifying
	Hill	Complementary
	Mountain	Complementary
1.9 Improve the penetration and positioning on the market	Plain	Complementary
	Hill	Complementary
	Mountain	Complementary
1.10 Promote the activation and access to tools for the management of risk and market risks	Plain	Qualifying
	Hill	Complementary
	Mountain	Complementary
1.11 Support to the profitability of companies	Plain	Specific
	Hill	Qualifying
	Mountain	Strategic
1.12 Promote the legality and respect of the rights in agriculture	Plain	Complementary
	Hill	Complementary
	Mountain	Complementary

General Objective 2: to support and strengthen environmental protection, including biodiversity, and climate action and to contribute to achieving the environmental and climate-related objectives of the Union.

2.1 Conserve and increase carbon sequestration capacity of farmlands and in the forestry sector	Plain	Qualifying
	Hill	Qualifying
	Mountain	Qualifying
2.2 Favour the reduction of greenhouse gas emissions	Plain	Qualifying
	Hill	Qualifying
	Mountain	Qualifying
2.3 Stimulate the production and use of energy from renewable sources	Plain	Qualifying
	Hill	Complementary
	Mountain	Complementary
2.4 Implement plans and actions aimed at increasing resilience	Plain	Complementary
	Hill	Complementary
	Mountain	Complementary
2.5 Reinforce the agrometeorological services and the development of monitoring and alert systems	Plain	Complementary
	Hill	Complementary
	Mountain	Specific
2.6 Support organic farming and livestock rearing	Plain	Strategic
	Hill	Strategic
	Mountain	Strategic
2.7 Favour the safeguarding and promotion of animal and plant biodiversity and natural biodiversity	Plain	Complementary
	Hill	Qualifying
	Mountain	Qualifying
2.8 Safeguarding, promotion and restoration of the rural landscape	Plain	Complementary
	Hill	Qualifying
	Mountain	Complementary
2.9 Support and development of agriculture in areas with natural constraints	Plain	Specific
	Hill	Complementary
	Mountain	Qualifying
2.10 Promote the sustainable use of phytosanitary products	Plain	Strategic
	Hill	Qualifying
	Mountain	Qualifying
2.11 Promote the active and sustainable management of forests	Plain	Specific
	Hill	Complementary
	Mountain	Qualifying
2.12 Favour the conservation and restoration of soil fertility	Plain	Qualifying
	Hill	Qualifying
	Mountain	Complementary
2.13 Make the use of water resources more efficient and sustainable	Plain	Qualifying
	Hill	Complementary
	Mountain	Specific
2.14 Safeguard surface and deep waters from pollution	Plain	Qualifying
	Hill	Complementary
	Mountain	Specific
2.15 Reduce the emissions of ammonia and gasses from agriculture and livestock rearing	Plain	Qualifying
	Hill	Complementary
	Mountain	Specific
2.16 Favour the diffusion of voluntary marketing systems of ecosystem services	Plain	Specific
	Hill	Specific
	Mountain	Complementary

General Objective 3: to strengthen the socio-economic fabric of rural areas.

3.1 Promote entrepreneurship in rural areas	Plain	Strategic
	Hill	Strategic
	Mountain	Strategic
3.2 Implement and/or strengthen the telematics and digital infrastructure	Plain	Specific
	Hill	Strategic
	Mountain	Strategic
3.3 Create and support occupation and social inclusion in rural areas	Plain	Complementary
	Hill	Qualifying
	Mountain	Qualifying
3.4 Promote innovation for sustainable and circular bio-economics	Plain	Complementary
	Hill	Complementary
	Mountain	Complementary
3.5 Increase the attractiveness of the territories	Plain	Specific
	Hill	Qualifying
	Mountain	Qualifying
3.6 Raise the level of the quality of life in rural areas	Plain	Specific
	Hill	Complementary
	Mountain	Qualifying
3.7 Support integrated planning in rural areas	Plain	Complementary
	Hill	Qualifying
	Mountain	Qualifying
3.8 Improve the planning capacity and the participation of local actors	Plain	Specific
	Hill	Specific
	Mountain	Complementary
3.9 Promote elevation of the quality and healthiness of agri-food and forest productions	Plain	Complementary
	Hill	Complementary
	Mountain	Complementary
3.10 Promote consumer knowledge	Plain	Complementary
	Hill	Complementary
	Mountain	Complementary
3.11 Reinforce the links of the sector with the territory and the types of direct relationship	Plain	Specific
	Hill	Specific
	Mountain	Specific
3.12 Favour the evolution of livestock rearing towards a more sustainable and ethical model	Plain	Qualifying
	Hill	Qualifying
	Mountain	Complementary
3.13 Reinforce the production of healthy and nutritious foods.	Plain	Complementary
	Hill	Complementary
	Mountain	Complementary
3.14 Reinforce management techniques and methods orientated towards the reuse of by-products	Plain	Complementary
	Hill	Specific
	Mountain	Specific

## Horizontal Objective: AKIS

A.1 Promote cooperation and integration between the different AKIS components	Plain	Complementary
	Hill	Complementary
	Mountain	Complementary
A.2 Promote the gathering and diffusion of information adequate for the companies' needs	Plain	Complementary
	Hill	Complementary
	Mountain	Complementary
A.3 Improve the information and training offer	Plain	Complementary
	Hill	Complementary
	Mountain	Complementary
A.4 Promote training and the consultation system (public and private)	Plain	Complementary
	Hill	Complementary
	Mountain	Complementary
A.5 Promote the use of digital instruments	Plain	Complementary
	Hill	Complementary
	Mountain	Complementary
A.6 Stimulate the participation of companies in the setting-up of innovations	Plain	Complementary
	Hill	Complementary
	Mountain	Complementary