



# LIFE ARCPROM



## LIFE18 NAT/GR/000768

Improving human-bear coexistence in 4 National Parks of South Europe

### ACTION D2

### Final long assessment report (medium term impact)



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## *SUMMARY*

This report examines the medium-term impact of the training activities conducted under Action C2. To collect data, an anonymous Google Forms questionnaire was created and distributed to participants of Action C2, with 84 of the 102 invitees responding. Notably, the questionnaire did not aim to test immediate recall of knowledge but instead focused on assessing how well trainees have consolidated and adopted new, more effective practices for managing human–bear conflicts. A secondary goal was to evaluate how much knowledge and skills had been institutionally embedded at the organizational level.

The responses show that the training and study visits were viewed as highly useful, with many elements now incorporated into daily practice. The action appears to have directly and indirectly enhanced participants' understanding of their crucial professional roles, providing both a theoretical foundation and a framework for capacity building. Additionally, at the organizational level, Action C2 seems to have triggered mechanisms for change and the integration of new practices, helping to embed them within each organization's Standard Operating Procedures (SOPs).

## ΠΕΡΙΛΗΨΗ

Η παρούσα έκθεση εξετάζει τη μεσοπρόθεσμη επίδραση των εκπαιδευτικών δράσεων και των ταξιδιών ανταλλαγής γνώσεων που διεξήχθησαν στο πλαίσιο της δράσης Action C2. Για τη συλλογή των δεδομένων, καταρτίστηκε και διανεμήθηκε στους συμμετέχοντες της Δράσης C.2. ανώνυμο ερωτηματολόγιο Google Forms, στο οποίο ανταποκρίθηκαν συνολικά 84 από τους 102 προσκεκλημένους. Αξίζει να αναφερθεί πως το ερωτηματολόγιο που χρησιμοποιήθηκε δεν σκόπευε στην άμεση ανάκληση γνώσεων, αλλά στην αξιολόγηση της εμπέδωσης και υιοθέτησης από τους εκπαιδευόμενους νέων και πιο αποτελεσματικών πρακτικών διαχείρισης των συγκρούσεων μεταξύ ανθρώπου και αρκούδας. Δευτερευόντως, αξιολογήθηκε ο βαθμός θεσμικής ενσωμάτωσης των γνώσεων και δεξιοτήτων σε επίπεδο Οργανισμού.

Από τις απαντήσεις που δόθηκαν, συνάγεται πως η εκπαίδευση και τα εκπαιδευτικά ταξίδια θεωρήθηκαν αρκετά χρήσιμα, ενώ πολλά στοιχεία αυτών εφαρμόζονται πλέον στην καθημερινή πρακτική. Η δράση φαίνεται να επηρέασε άμεσα και έμμεσα το βαθμό κατανόησης του κρίσιμου επαγγελματικού ρόλου των συμμετεχόντων, παρέχοντας υπόβαθρο θεωρητικής γνώσης και πεδίο ανάπτυξης δεξιοτήτων. Ακόμη, σε επίπεδο Οργανισμών, η δράση C.2. φαίνεται να ενεργοποίησε μηχανισμούς αλλαγών και ενσωμάτωσης νέων πρακτικών στις Τυποποιημένες Διαδικασίες Λειτουργίας κάθε Οργανισμού.

## *RIASSUNTO*

Il presente rapporto esamina l'impatto a medio termine delle attività formative realizzate nell'ambito dell'Azione C.2. Per la raccolta dei dati è stato predisposto e distribuito ai partecipanti dell'Azione C2 un questionario anonimo tramite Google Forms, al quale hanno risposto complessivamente 84 dei 102 invitati. È importante sottolineare che il questionario non mirava al richiamo immediato delle conoscenze, bensì alla valutazione del grado di consolidamento e di adozione, da parte dei partecipanti, di nuove e più efficaci pratiche di gestione dei conflitti uomo-orso. In secondo luogo, è stato esaminato il livello di integrazione istituzionale delle conoscenze e competenze acquisite all'interno degli Organismi di appartenenza.

Dalle risposte emerge che la formazione e i viaggi di studio sono stati ritenuti molto utili e che numerosi elementi appresi vengono ormai applicati nella pratica quotidiana. L'azione sembra aver influito, direttamente e indirettamente, sulla comprensione del ruolo professionale critico dei partecipanti, fornendo una solida base teorica e un contesto per lo sviluppo di competenze operative. Inoltre, a livello organizzativo, l'Azione C2 sembra aver attivato meccanismi di cambiamento e di integrazione di nuove pratiche, contribuendo anche al loro inserimento nelle Procedure Operative Standard (SOP) di ciascun Organismo.

## Introduction

This mid-term assessment Deliverable examines and presents the impact of the training activities carried out under Action C.2. of LIFE ARCPROM, taking advantage of the time that has passed since their completion to capture lasting changes in practice and organisational routines. In contrast to the mid-term report—which prioritised immediate, post-training verification of knowledge acquisition through standardized testing—the present deliverable adopts an outcomes-oriented perspective on learning. Specifically, it moves beyond short-term recall to interrogate the extent to which course content has been consolidated, operationalised, and embedded within the day-to-day routines of those who attended the seminars.

To achieve the Deliverable’s objectives, the present evaluation deliberately refrained from administering direct knowledge tests (e.g., multiple-choice questionnaires) to participants. Instead, it employed a structured questionnaire focused on the stabilization of competencies, the uptake of recommended protocols, and the integration of good practices in authentic work environments. The questionnaire was designed to capture both self-reported adherence to procedures and the frequency with which specific tools and methods—introduced during the webinars, field workshops, and three-day seminars—are now enacted in situ.

A second analytic axis concerns diffusion effects. The deliverable aims to assess the degree to which trained individuals have acted as knowledge multipliers within their professional communities by transmitting methods, mentoring colleagues, and influencing local standard operating procedures. In doing so, it treats peer-to-peer transfer not merely as ancillary to training success but as a core indicator of systemic impact.

Finally, beyond the extension of individuals’ knowledge and the development of their skills, the report documents actions and procedures adopted by the Public Organizations that originated in, or were accelerated by, the project’s educational activities after their employees attended the C.2. action courses. The analysis traces how selected practices—initially presented as recommendations during training—were subsequently codified into formal workflows, protocols, or mandatory routines. This transition from discretionary use to regulated practice is considered the strongest available signal that capacity building has matured from project-bounded outputs to organisation-level outcomes.

## Methodology

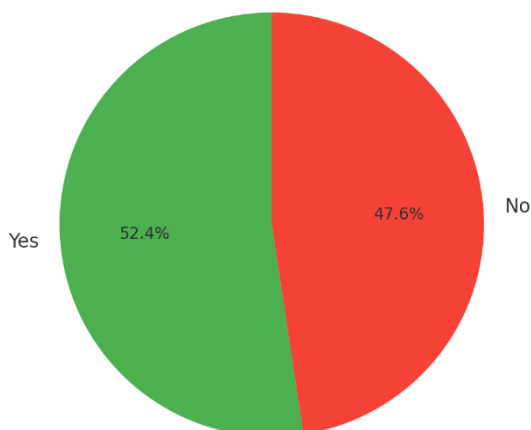
The questionnaire used to collect data for this evaluation was distributed electronically to the trainees immediately after the conclusion of the LIFE ARCPROM Final Conference. This timing was considered particularly appropriate, as the conference programme itself had a strong educational component. In addition, the event provided an excellent opportunity to bring together scientists from Greece and other countries, as well as staff from various public bodies involved in the conservation of the brown bear and wildlife more broadly.

The questionnaire was distributed via Google Forms, and participants were given a defined period to submit their responses anonymously.

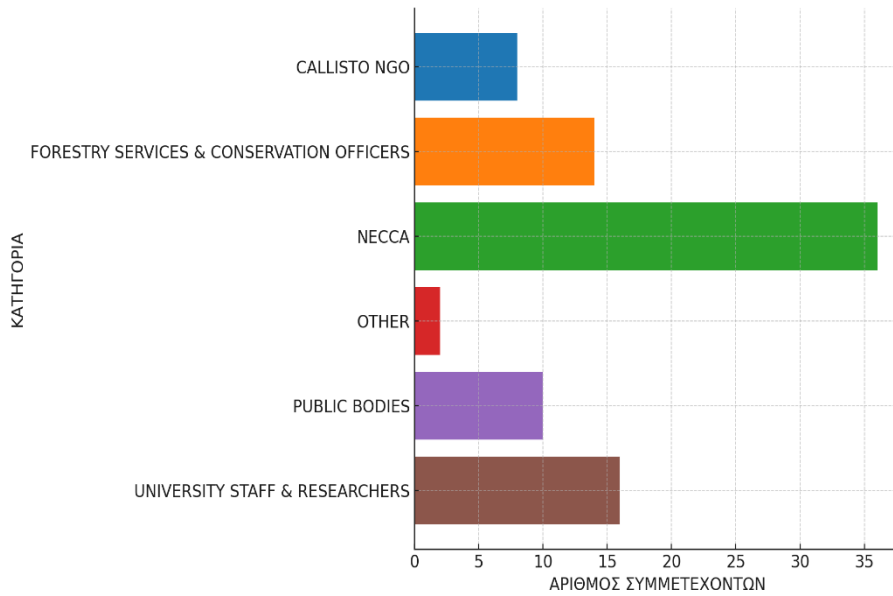
A total of 102 questionnaires were distributed, from which 84 responses were collected.

## Results of the Long-Term Evaluation of Training Activities

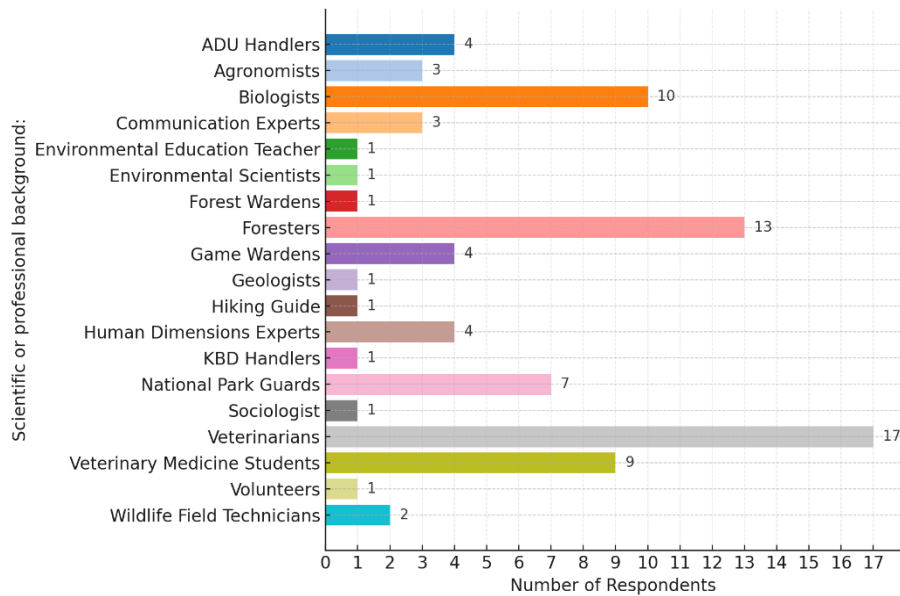
### 1. Are you affiliated with any of the LIFE ARCPROM project partners?



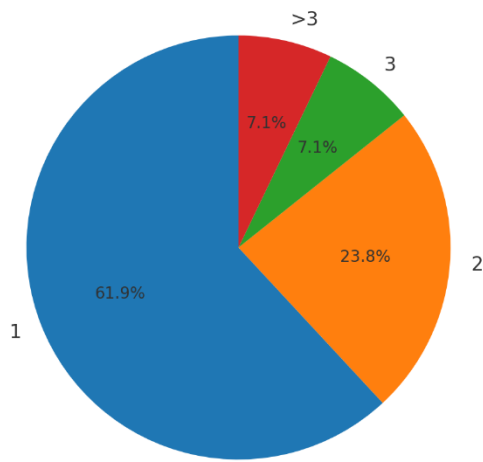
**2. Please select the category that best describes your Organization.**



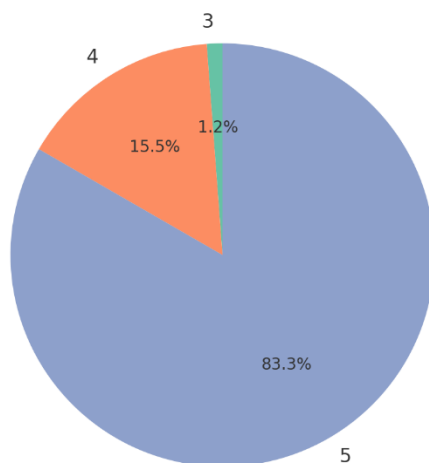
**3. Please indicate your scientific or professional background.**



4. How many educational courses did you attend during the LIFE ARCPROM Project?

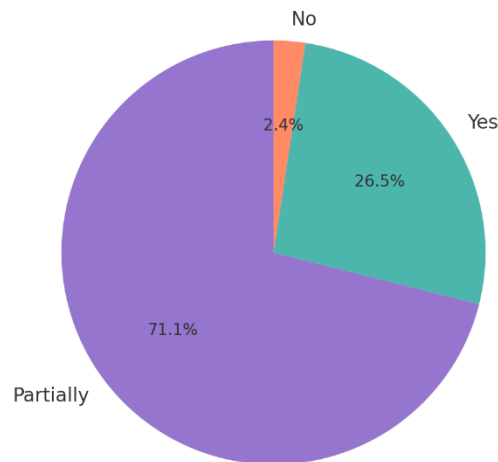


5. How useful did you find the content of these activities for your work?



**Note:** Responses were recorded on a five-point Likert scale (1 = not useful at all; 2 = slightly useful; 3 = moderately useful; 4 = very useful; 5 = extremely useful).

**6. Did you apply any of the knowledge or skills acquired in your daily professional work?**



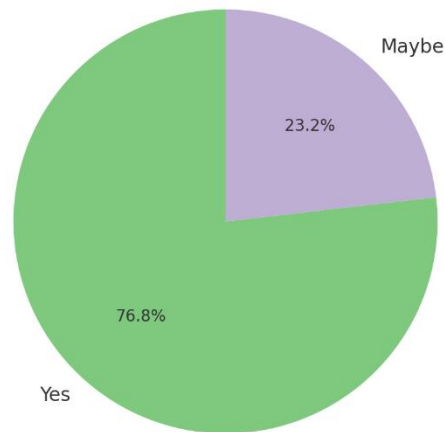
**Note:** The relatively high number of respondents who selected “Partially” suggests that various contextual factors may have limited the daily application of knowledge gained during the seminars. These factors could include potential institutional restrictions, lack of proper equipment, resources, procedures, and limited opportunities due to the time pressure from daily multitasking. Additionally, gaining more experience before feeling fully confident in independently implementing these practices might be a key reason for partial adoption. Sometimes, participants may have adopted only certain parts of the training directly related to their professional roles, while others were considered less relevant to their immediate duties. Overall, this distribution of responses indicates that the training was impactful. However, it also underscores the need for ongoing support, follow-up mentoring, and the gradual integration of practices into institutions’ job descriptions and daily routines.

**7. Did you share the knowledge gained with your colleagues or team members?**

All respondents answered positively to the question about whether they shared the knowledge gained during the training with colleagues or team members. This unanimous response demonstrates a strong interest in improvement, both at the individual professional level and at the organizational level. It also reflects a collective awareness and reflection on the importance of continuously strengthening capacities related to wildlife management.

Having said the above, it is reasonable to assume that the training courses conducted under the LIFE ARCPROM project influenced a larger circle of professionals than those formally recorded in the evaluation. The process of sharing knowledge and best practices has led to a multiplying effect, triggering a broader trend toward increased expertise and skills within the workforce involved in wildlife conservation and management. This outcome underscores the value of training activities not only as individual learning opportunities but also as a valuable means for organizational growth and cultural change in the field of wildlife-related work.

8. Would you be interested in similar training activities in the future?

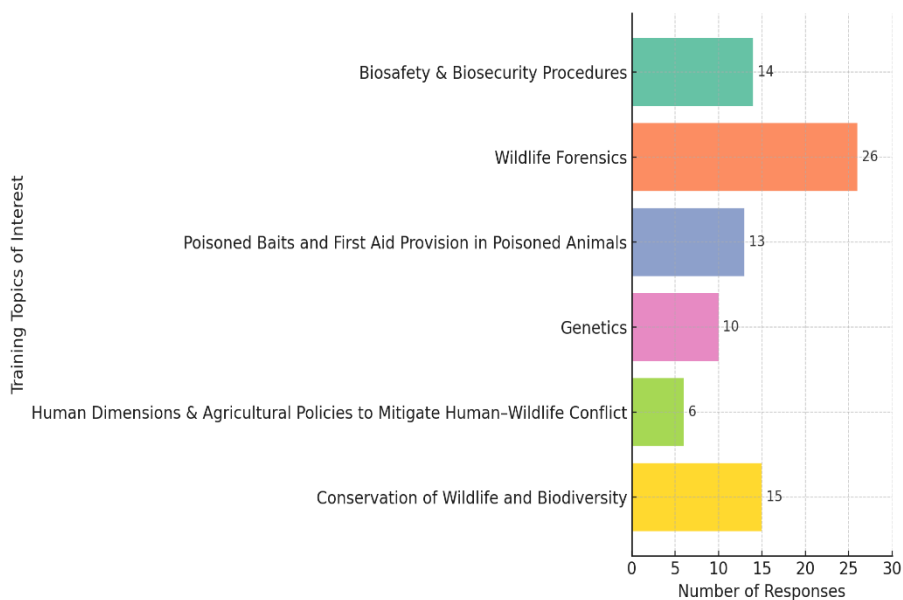


**Note:** When the answer was anything other than **Yes**, participants were invited to describe in free text the main issues affecting their participation in similar future training courses. These responses were then categorized and are shown in the chart below.

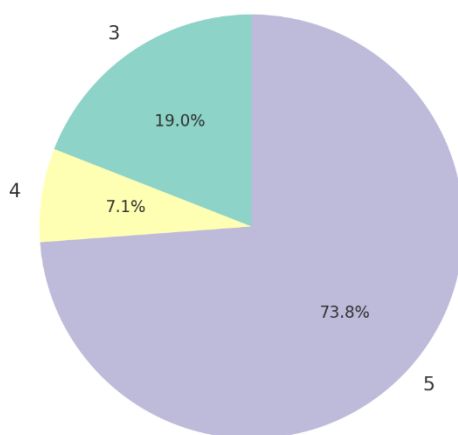


**9. What kind of topics would you be interested in?**

In this question, respondents were invited to provide open-ended answers about the training topics they would be most interested in. The responses were collected, organized by theme, and are shown in the following chart.



**10. To what extent did these training courses support your professional development?**

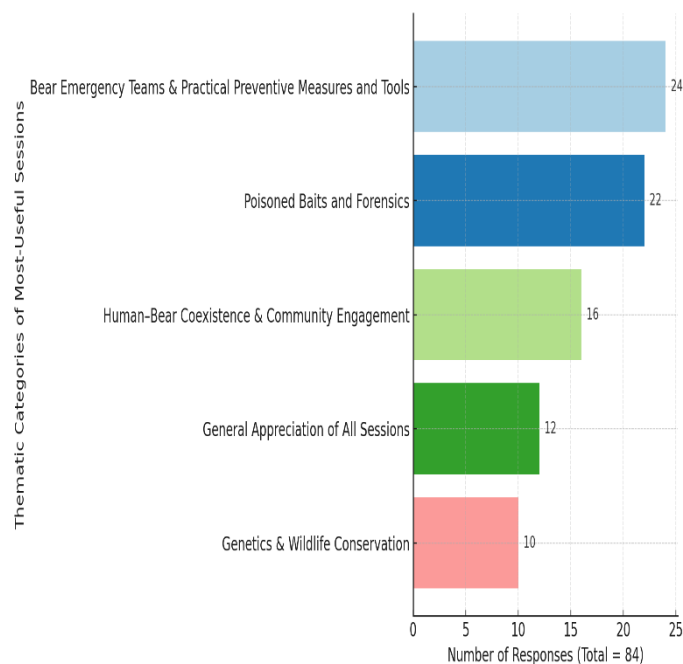


**Note:** Responses were given on a five-point Likert scale, where **1** = Not at all supportive, **2** = Slightly supportive, **3** = Moderately supportive, **4** = Very supportive, and **5** = Extremely supportive

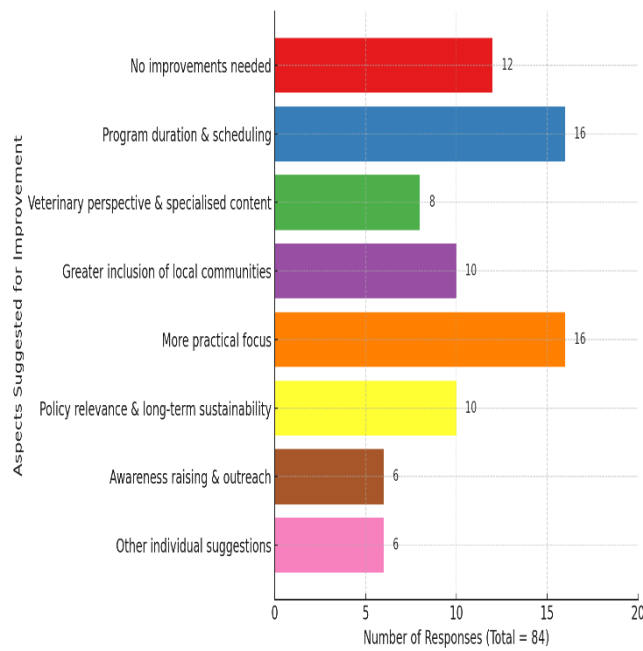
**Note:** When the score given was **below 4**, respondents were encouraged to elaborate in free text, sharing their reflections on the limitations they faced and their suggestions for improvement. This method helped gain a deeper understanding of the specific factors that lowered the perceived value of the activities for professional development.

A total of 16 respondents rated the training courses as only moderately supportive (score = 3). Based on their open-text explanations, their personal professional improvement depends on four main factors. First, several noted limited exposure after training due to bureaucratic or legal restrictions, which limited opportunities to apply new methods in real cases. Others pointed to selective relevance across duties, as only some modules closely matched their roles and job descriptions, while other topics had little impact on their routine tasks, leading to a more tempered overall assessment. Moreover, some respondents described support dependencies, indicating that effective use of new skills required supervisory approval, inter-institutional collaboration and coordination, or access to specific tools that were not always available. Finally, a recurring theme concerned institutional inertia, with participants reporting organizational reluctance to adopt new practices or assign new responsibilities, thereby constraining the translation of training into daily professional improvement.

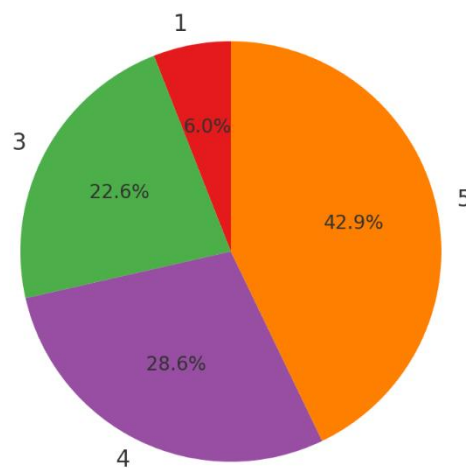
### 11. Which educational topic did you find most useful?



**12. What aspects could be improved?**

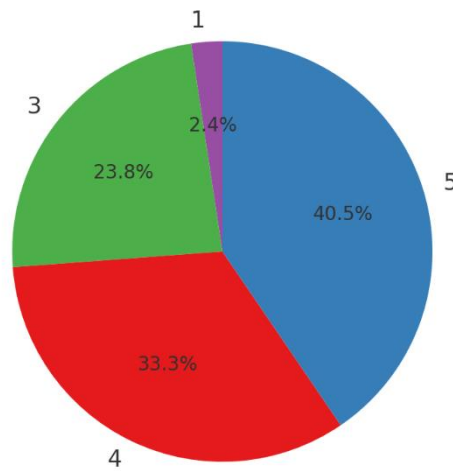


**13. How confident do you feel in applying the methods taught during the seminars when operating under real field conditions?**



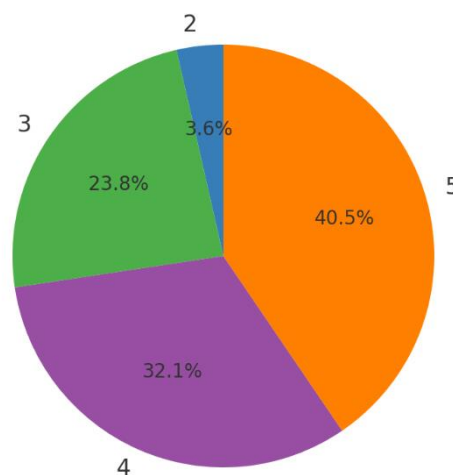
**Note:** Respondents who rated **below 4** (n=24) explained that the limited number of field drills and the short duration of practical segments reduced their confidence to act independently in the field. They suggested that courses should integrate more scenario-based rehearsals and structured repetition, which would help consolidate learning under realistic conditions.

14. To what extent did the seminars prepare you for emergencies or conflicts?



**Note:** Twenty-two respondents rated **below 4**, noting that the simulation exercises lacked sufficient scale and realism to build genuine preparedness. They recommended implementing full scenario-based drills with time pressure, clear role assignments, and structured after-action reviews. In addition, it was proposed that their organisations should establish the periodic organisation of practical exercises under the supervision and guidance of trainers.

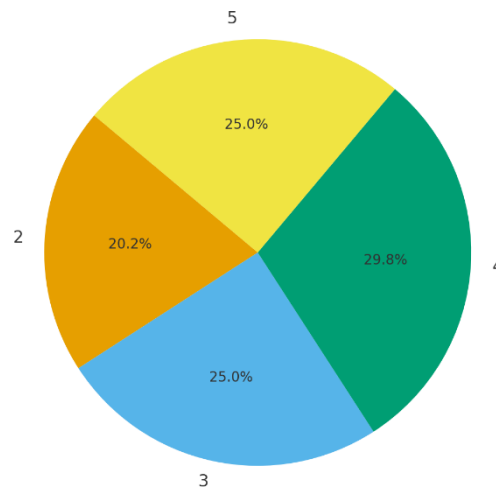
15. To what extent did the seminars change your perception of your professional role or identity?



**Note:** Twenty-four respondents rated **below 4**. Although the seminars enhanced awareness, the link between acquired skills and the evolution of participants' professional roles was viewed as insufficiently explicit, with post-training responsibilities not clearly delineated. Respondents recommended role-mapping

exercises, explicit articulation of career-development trajectories, and scenario-based reflection to consolidate professional identity change.

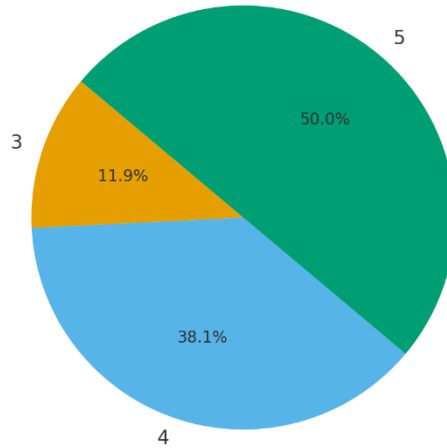
**16. To what extent have the new practices/protocols you learned been integrated into your Organization's Standard Operating Procedures?**



**Note:** Respondents who rated the level of integration below 4 were later asked to identify the main barriers to organizational adoption of the new practices. Common themes included insufficient staffing capacity, bureaucratic and legal hurdles that delay or prevent formal adoption and formalization (due to multilayered approval processes and compliance requirements), resource and infrastructure shortages (such as lack of specialized equipment, limited funding, and restricted access to trained personnel), and organizational inertia or resistance to change, where entrenched routines and professional cultures discourage replacing familiar procedures with new, evidence-based ones. Together, these factors highlight why the shift from individual learning to organization-wide practice is often slow, dependent on specific governance and resource conditions.

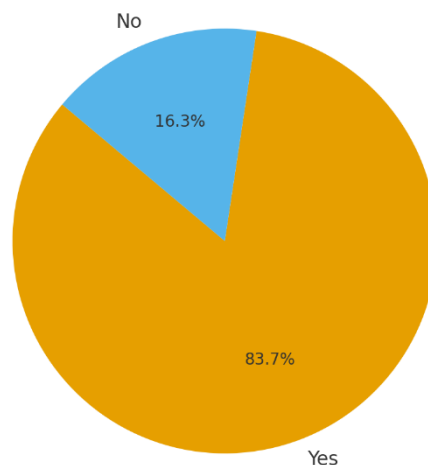
Further, respondents who selected the highest rating (5) were subsequently asked to specify which components of the training were adopted by their organizations. Their answers indicate a marked post-training alignment of operational mechanisms with biosafety and biosecurity measures, suggesting that relevant protocols were not only acknowledged but systematically embedded into routine practice. In addition, several organizations that previously lacked Poisoned Bait Detection Dog (PBDD) units reported that they are now in the process of acquiring such capacity and moving toward operational deployment, signaling a tangible expansion of institutional readiness for incident response and prevention.

**17. To what extent do you feel that the training improved your ability to communicate with the general public or local communities?**



**Note:** Respondents who selected the highest rating (5) were then asked to specify how the training improved their communication skills. Their feedback shows a significant improvement driven by two main factors. First, trainees gained a deeper understanding of brown bear behavior—its movement patterns and likely responses—allowing them to give clearer, evidence-based explanations to the public and local stakeholders. Second, practical experience with First Aid Anti-Poison kits and essential veterinary procedures provided tangible reference points that made it easier to communicate with livestock farmers across regions. Overall, these elements helped trainees find common ground with communities and gradually build residents’ trust, thereby enhancing cooperation and acceptance of management efforts.

**18. Have measurable outcomes emerged (e.g., reduction in human–bear conflict incidents) that can be linked to the training? If YES, please clarify.**



**Note:** Respondents reported that the training courses led to noticeable improvements in key areas of wildlife management and stakeholder engagement. Field teams observed fewer poisoning-related deaths, thanks to earlier detection of cases and a more systematic use of anti-poison protocols that enabled quick reporting, coordinated cleanup, and proactive risk reduction. In addition, incidents involving firearm use seemed to decrease as staff used standardized de-escalation and deterrence methods.

At the community level, the number and severity of human–bear interactions declined through targeted outreach, better waste-management practices, and the spread of practical husbandry measures among livestock owners. Meanwhile, the strategic use of Antipoison Dog Units increased the identification and removal of poisoned bait before it caused harm, and structured advice to farmers helped reduce losses and disputes.

## Recommendations

Based on this medium-term assessment, several targeted recommendations can enhance future training and boost institutional impact. Participants consistently urged for more practical, scenario-based exercises that include time pressure, clear role assignments, and structured debriefings to reinforce skills and confidence in real-world situations. They also supported expanding content to cover forward-looking topics such as forensic techniques, genetic monitoring, and anti-poison strategies, complemented by international case studies to promote the transfer of best practices. To sustain learning, respondents highlighted the importance of follow-up and refresher opportunities—such as periodic workshops, short digital modules, and concise guidance materials. At the organizational level, success relies on formal integration into SOPs and securing adequate resources. Lastly, interdisciplinary exchange should be prioritized through customized sessions that bridge professional vocabularies and encourage collaboration among various stakeholders.

