

**Environmental Impact Assessment
and
Environmental Management Plan**

April 2019

CEPF Grant 108820

Grantee

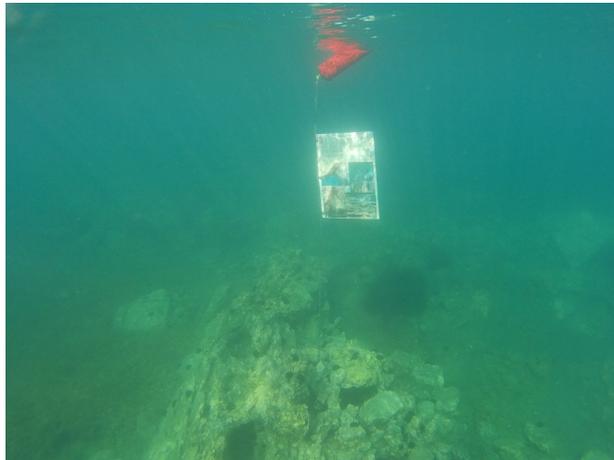
NGO Mediterranean Center for Environmental Monitoring (MedCEM)

Project Title

“Support local community's involvement in protection and promotion of the potential marine protected area – Katič”

Project Location

Future MPA Katič, Petrovac, MNE



Grant Summary

1. Grantee organization – NGO Mediterranean Center for Environmental Monitoring - MedCEM
2. Grant title - *“Support local community's involvement in protection and promotion of the potential marine protected area – Katič”*
3. Grant number -**108820**
4. Grant amount (US dollars) \$232,376.20
5. Proposed dates of grant December 2018 – November 2021
6. Countries or territories where project will be undertaken.- Montenegro
7. Summary of the project

Project: Support local community's involvement in protection and promotion the future Marine protected area – Katic has been realized by NGO Green Home in cooperation with MedCEM and Montenegrin Ecologist Society. The project duration is 36 months. The main aim of the project is to reduce impacts on marine biodiversity while supporting locally based management for biodiversity conservation and creating incomes for from the low negative impacts activities.

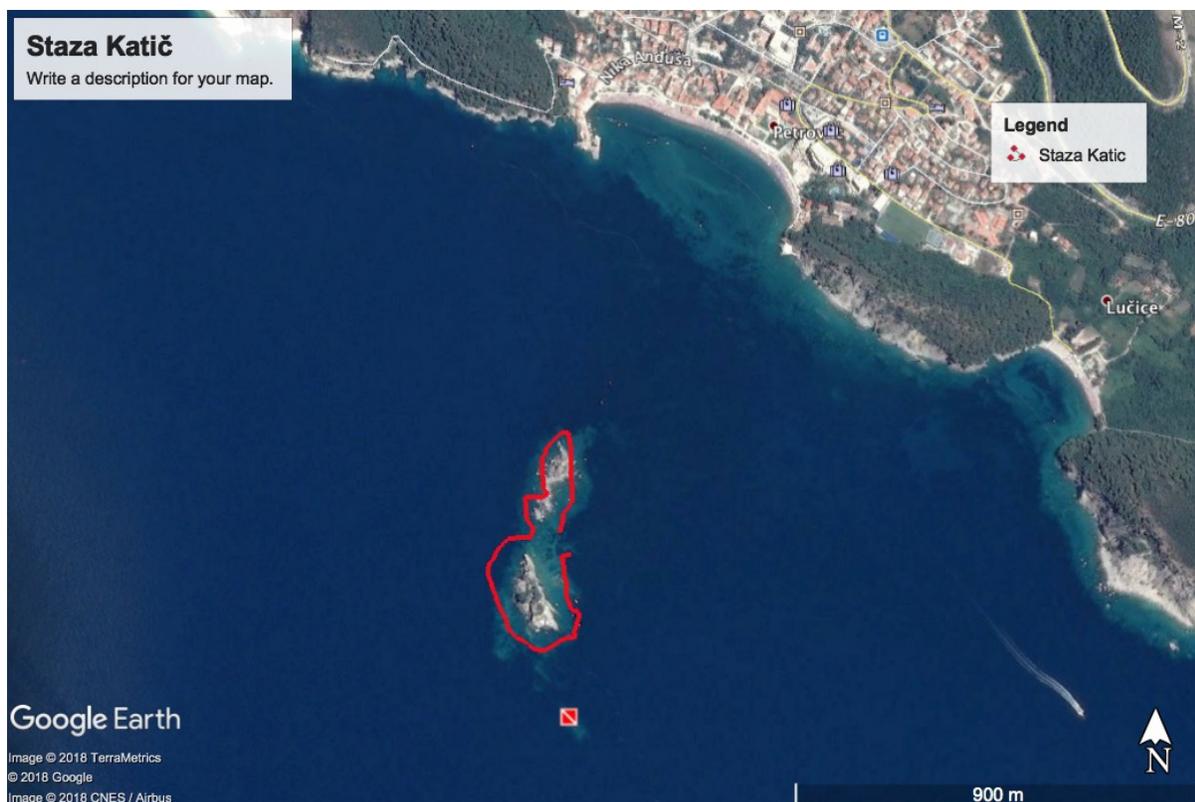
The project is divided in four components:

- Building capacity and networking of local actors in protection and promotion the first potential marine protected area;
- Supporting development and marketing products for a sustainable development: promotion Katič as the first marine protected area and promotion diving tourism;
- Advocate on national and international level establishemnt the marine protected area – Katič in Montenegro;
- Field work – Collecting the data in potential MPA.

8. Date of preparation of this document. – April 2019

9. **Status of area to be impacted:** This section should describe the applicant's understanding of the site.

Islets are upper part of the underwater reef that stretches in North-South direction and consists of layers of sediment lime stones that is characteristic of whole surrounding area. Aside of Holy Sunday (islet named by the small chapel on it) and Katič (islet under vegetation), there is a third peak of reef that raise up from bottom until 1-2 meter bellow surface and it is called Donkova Seka. Above water, this islets offers a perfect habitat for various sea birds (at least 5 bird species are common on this spot) that are present in great numbers relating to the size of the islets. Underwater characteristic paysage is unique for whole Katič area. Underwater cliffs of sediment stones, rocks full of cracks and holes and sand pools in some parts of the bottom offers various types of habitats. That is reason the reason of unusual biodiversity at this place, that should be presented through underwater trail.



FLORA

In terrestrial part of the Katič was not under detailed survey - there is visible domination of *Pinaceae spp.* on land. Marine environment survey shows several species that might be interesting for diving visitors. There is dominant and very dense *Posidonia oceanica* meadow that surround islets from all sides, as well as red, brown and green algae that are present on various depths in this area.

FAUNA

Marine environment at this place offers various shapes of life, and gives perfect opportunity to make interesting underwater trail. Many species of fishes and phyla of invertebrates offer many possibilities to present importance of biodiversity at this spot.

MPAs can be regarded as sustainable development labs working for effective ocean and coastal management. Out of the tools that contribute to educating and raising public awareness of the environment in MPAs, “underwater trails” have swiftly gained recognition as practical and effective, embodying the concept of sustainable development.

1. **Underwater trail could be defined** as instrument for sustainable development. Underwater trail is an example of action taken for the sustainable development of a territory. Economic, environmental and social, aspects can be taken into account:

From an economic perspective: It is an tool to develop sustainable, environmentally friendly and responsible tourism, a job-creating instrument and a professional training tool for stakeholders having a connection with the marine environment (even indirect).

From a environmental perspective: It is an environmental conservation instrument in land-use management as it contributes to channelling visitor flows and thus reduces their impact on the environment. Also, it is an environmental education tool for a large target group including school pupils and young people by integration into educational projects.

From a social perspective: It is an personal development tool suitable for all (children, families, seniors), and also could be an instrument for integrating people with social or physical difficulties.

2. As a land-use management tool: given the pressure on Mediterranean ecosystems, underwater trails may play a role in their management. *The role of underwater trails in environmental management:* Most MPAs plan their action using a management plan/scheme. This, usually, encompasses: action to protect or restore the environment, management of uses and pressure, and environmental awareness-raising and education. U/W trails are one of the strategies for channeling visits to a determined area, while fostering environmental education that a manager may include in the management plan.

Priorities for an underwater trail: Presentation of the environment, environmental education and awareness-raising, communication, and promoting heritage and the marine environment. Underwater trail is a way of teaching users to view the sea differently, as a living environment with strengths and weaknesses. Users must be encouraged to adopt appropriate behaviour to protect the sites. An underwater trail is also a source of economic activity, creating jobs and generating revenue if an admission fee is charged. That revenue can then be reinvested in site management – these trails are tools integrated into management plans.

3. Regulations: presents a list of regulatory aspects that any project must take into account within the framework of domestic legislation.

4. Educational aspects and methods: target groups, different approaches to educational practices, content and methods, possible tools.

5. Designing an underwater trail: addresses the actual creation of an underwater trail, from choosing the site through to organisation, necessary resources and cost.

6. The economic approach to the underwater trail: addresses the various business models that project leaders may consider based on case studies. From an economic perspective, underwater trail is activity that generates market and / or non-market income and benefits the local population (leisure, sense of territorial ownership), tourists (discovery), professionals (indirect impact and derived benefits) and institutional stakeholders (promotion). While underwater trails can yield profits, they also incur expenditure. The decision to create an underwater trail will depend on the answers to the following questions : How much will it cost? Will the income generated cover all or part of the costs? What economic model should be chosen?

The choice of an economic model involves both the choice of management and the financing method: There are **2 management models:** direct management by the operator of the area or management delegated to a third party. There are **2 types of funding:** public or private funds (sponsorship) if users are not charged to do the trail, or funding by users, when a fee is charged for the activity. Depending on the case, **this financial participation by visitors may cover the full cost or a varying portion of the costs** incurred by the operator. Between the two extremes, there is a **broad range of mixed solutions** which are perfectly suited to the various types of underwater trail and MPA managers, and to the various stages in the activity's development (start-up, growth and full development). *All of characteristic of underwater trails listed above should be considered by future management body in a purpose of establishing the most appropriate model for Katič area and it's needs. Whatever decision will be, there should be reconsideration from several stakeholders how this concept could be realized in the best acceptable way for all parties. However,*

importance and positive effect that installation of an underwater trail will bring into future functioning of MPA should not be under question by any meaning.

10. **Approach:** This section will describe proposed actions during the project. Specifically, what do you intend to do and how will you do it?

This activity will be coordinated by NGO MedCEM with support of NGO Green Home and local organizations. Activity will have been realizing from **January 2020 – June 2020**. Preparation activity's implies collecting approvals, mapping locations, procurement of info tables as well design and printing posters and on the end setting up. Underwater Trail is a great place for beginners and anyone who wants to learn about marine life by reading the info tables along the trail. 8-10 points will be marked. On this tables will be presented marine life, with photos and information's about interesting, rare and vulnerable species. Managing of underwater trail will be delegated to local diving club. Additionally, this project intent to promote "Diving with Groupers" as potential future activity that will contribute in raising awareness, education and nature conservation in this area. This should be also considered within concept of future underwater trail. This activity will be realized by NGO MedCEM, taking into consideration their experience in the setting up underwater trails. Physical Plans for area managed by Public Enterprise Coastal Zone Management of Montenegro did not foreseen any areas for underwater trails. Basic EIA study on future underwater trail around Katič Islets should offer to all interested sides solutions for model of design, installation, use and maintenance trail in sustainable way, with the lowest impact on marine environment. Study should deliver preparations and steps needed for establishing an exemplary model of trail considering all specific location circumstances. As the most relevant and appropriate manual for planning installation of trail will be used WWF and MedPAN "UNDERWATER TRAILS Handbook" (2012). Therefore, this document should give recommendations for successful and, for the guest, satisfying tourist experience that does not disturb the islets surrounding wildlife. This Study should deliver proposal for the positioning of Katič underwater trail (map with points of interests), and identify the rules for organization all activities, specific requirements related to the site, means required to guarantee safety, possible systems of taxation and solutions for governing the site and conserve the environment. Study will propose possible thematic subject for tables on each specific point of interest related to nature or ecological values in this area.

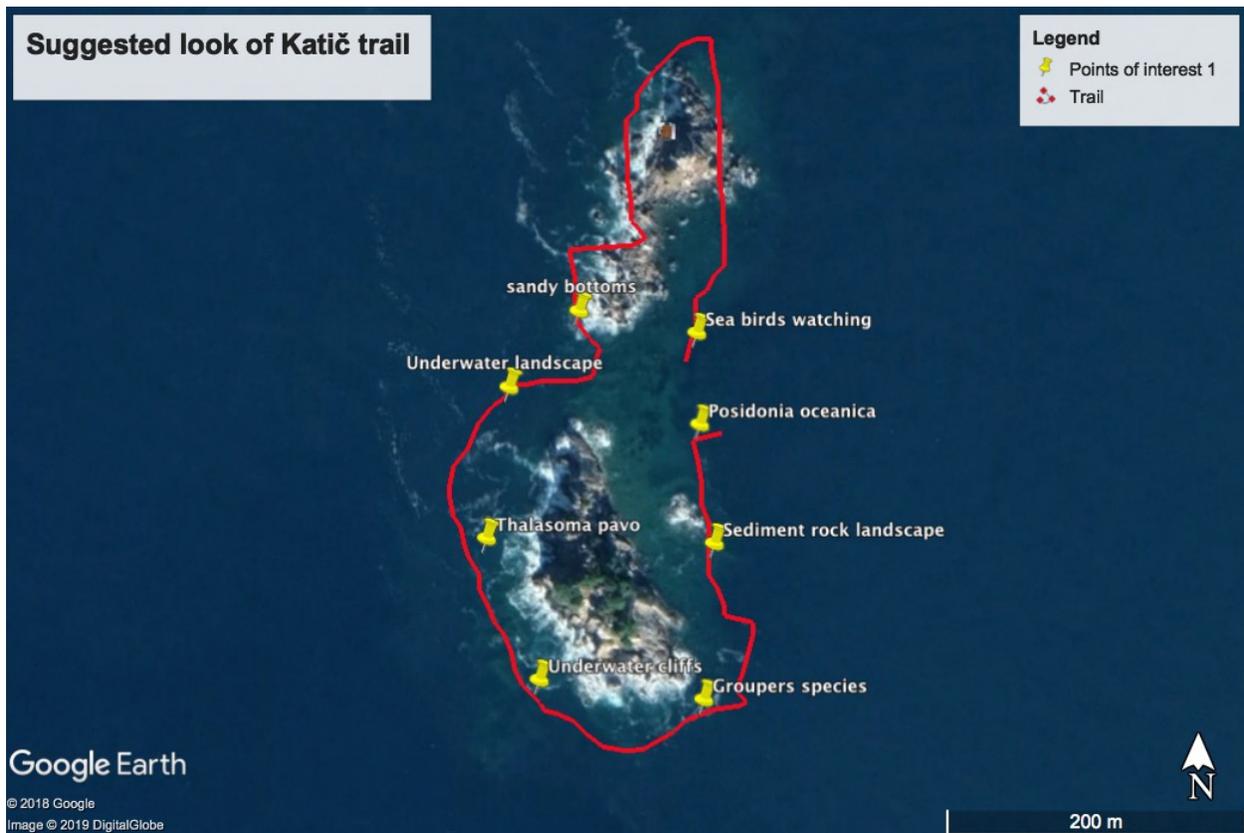
For installation of the elements o trail will be used materials and methodologies that are already proven and recommended as the most appropriate for this purpose. All of these elements are consider to be with lowest possible impact on environment or nature disturbance in this area. For anchoring buoys on points of interests is proposed using of 4 different types of anchors:

1. «Dead weight» (concrete block – this project is aiming to promote deadweight's full of holes, with the function of the artificial reefs)
2. Sand screw (iron screw for the sandy/pebbles bottoms – Screws length of 150 cm, shaft diameter of 2,5, and disc diameter 25-30 cm, covered with several layers of Paint for protection)
3. Spiral anchor «Harmony type P» (for use in *Posidonia*).
4. Using natural holes in bottom rocks for chain clutching

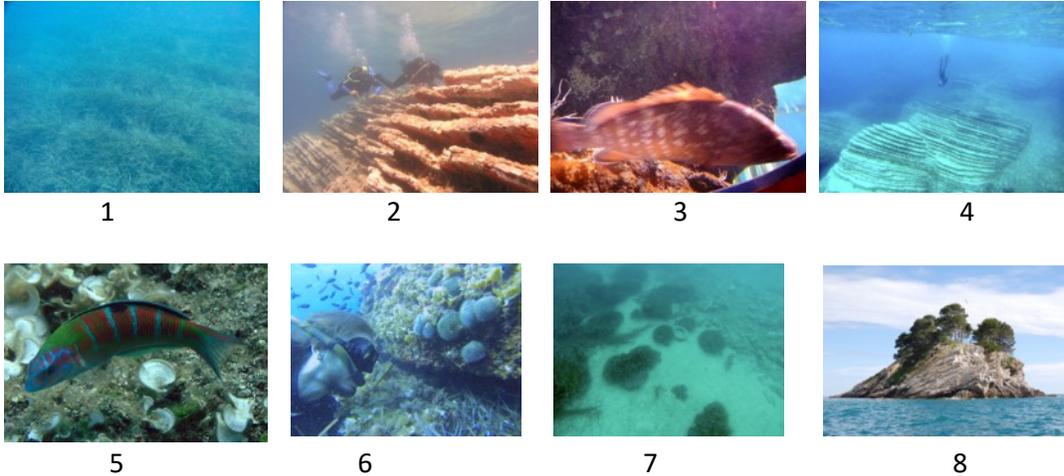
All these types of suggested anchoring buoys on the points of interests are designed as the ones with less possible impact on environment. Advantage of these anchors is also their ability to be removed or re-installed easily. For underwater info tables will be used painted Forex tables of 10mm thickness. This material is in use for similar purposes, and shows a great resilience on mechanical and chemical disturbance from marine surrounding. Due to growth of algae and other marine organisms on all submerge surfaces (perifiton), these tables need to be cleaned underwater on a weekly bases. Buoys used for point of interest should be visually distinctive from usual anchoring buoys, without possibility to be used as mooring for

boats (no rings on a buoy). These buoys also should be made to be more easily to spot from distance, so they should have higher point above the water than usual buoys (such as flags or similar marks). Chain will be used to connect all elements of the point of interest (anchors, tables, buoys). Depending on thickness of metal and wear off in maritime conditions, this chains might be needed to be replaced on each new season. Boats that will bring tourist to visit underwater trail should use ecological moorings on Eastern part of Katič island.

Suggested points of interest for this area came as sublimation of results from several surveys, and experience from other similar project.



1. *Posidonia oceanica*
2. Sediment rock landscape
3. Species of Groupers
4. Underwater cliffs
5. *Thalassoma pavo*
6. Underwater landscape between islets
7. Sandy bottoms habitat
8. Sea birds



11. **Anticipated impact:** this section will describe the impact and how this impact has been determined.

Role of underwater trails in MPA could be compared with similarity to mountain tracks in some National park: they should direct visitors in the most effective route in chosen area. One of characteristic about underwater trails is that their installation is planned in the way to have less possible impact on environment. It is a carefully planned tool for organized visits to underwater values in particular area. All plans about use of materials, methods of installation, transportation, number of visitors and their behaving on trail - must consider the lowest possible impact on nature, regarded to capacities of particular area. In some MPAs, visiting an underwater trail is the only chance for tourists to approach and see the most protected and the most valuable parts of these areas. So, it is expected that underwater trail will contribute for better regulation in visitor's activities in the most sensitive parts of an MPA, and in many ways it could lead to mitigation of negative anthropogenic impact to nature. We can conclude that none of any crucial environment segments in MPA cannot be endangered with installation of an underwater trail around Katič island. It is hard to predict at this point how many visitors can be expected during summer season, but for sure in first several years of functioning this underwater trail could not generate such high number of people that could make any severe impact on environment. On other side, positive educational and promotional effects on visitors that underwater trail could demonstrate related to the role of an MPA, could not be disregarded in any way, or compared to minimal negative effect that organized group of people with professional guidance could have in this area.

All of proposed points of interest are closer than 100m to the islets, positioned at the depths of 3-10 meters, which makes them ideal for snorkeling. Suggested trail is designed to be used in a whole length around both islets, or in shorter version around just one of them – depending on the visitor's demands.

The underwater trail should be installed for use during summer season, and almost all parts of it will be removed (uninstalled) in beginning of autumn season. All floating/standing elements of trail will be removed, conserved and taken into storage to wait for another season. The anchors will remain on the sea bottom for the re-use in the next season.

12. **Mitigation measures:** Describe measures that will be taken to mitigate negative impacts.

All activities related to the setting up underwater trail will be done in accordance with Underwater Trails Handbook.

13. **Actions to ensure health and safety**: Describe actions that will be taken to ensure the health and safety of workers as well as the site. Include a description of waste management and/or disposal.

All engaged on procurement and setting up underwater trail will work within described safety precautions for every work. There will be no waste disposal.

14. **Monitoring and Evaluation**: This section aims to outline what steps the proponent will take to monitor and evaluate the impact of the proposed intervention.

Having in mind that managing of underwater trail will be delegated to local diving club, monitoring and evaluation of the success of this activity will be measured through the number of tourist visits and their comments. MedCEM has already established communication and cooperation with local diving club and local diving club will be involved from the project beginning. So through the communication with local diving club we will have information of the impact of the proposed intervention.

15. **Permission of the landowner**: Please verify permission of the landowner to undertake actions on the site, and verify that you have the required permits to undertake this work.

For the implementation this activity it will be necessary to get permission from Public Enterprise for Coastal Zone.

16. **Consultation**: This section aims to outline the range of informed consultations that the grantee has had both with experts to optimize the potential for success, and with stakeholders, particularly local communities, who are potentially affected by the proposed actions. Include dates of consultations.

Underwater trail is worldwide recognized tool for education and tourist attraction in marine protected areas. It involves receiving the public in conditions that must be perfectly safe for an organized sport, tourism and educational activity, for which a fee may or may not be charged. Regulations linked to an underwater trail must consider all related rules both on land and sea. Thus planning the trail in the core zone of future MPA should be done with the highest respect to nature protection and best practice related to the matter. The concept of an underwater trail is something that Detailed Spatial Plan for Coastal Zone Management do not consider at all in previous plans. MedCEM already experienced labyrinth of legal explanation and excuses from various relevant institutions for solving this subject (Ministry of Sustainable Development and Tourism, Public Enterprise Coastal Zone Management, local Tourist organization...) – they do not foreseen necessity of implementing such activity in a future MPAs. Related to this subject (and aware of CEPF project plans related to this activity), at the end of 2018 MedCEM submitted official Comment and suggestions to Ministry of Sustainable Development and Tourism for take into consideration areas for Underwater trails on a future long-term Spatial planning of Coastal Zone Management. So far, we did not have any feedback about this matter. Also, Montenegro didn't have for last several years any Law about Diving activities, that could explain or give any relevant solution for this problem. For all these reasons we believe that some problems with legal and spatial documentation, and approval from relevant institutions could occur. Project intention is to do our best for developing whole concept and every single detail related to underwater trail installation on Katič. Knowing that in future Katič will be MPA for sure, implementation of underwater trail could not be postponed endlessly. In this regard within the preparation phase of the activity will be done consultations with Ministry for Tourism and Sustainable development, Public Enterprise for Coastal Zone and with local diver club. Local diver club will be involved in the implementation phase also.

17. **Disclosure:** CEPF requires that safeguard documents are disclosed to affected local communities and stakeholders prior to project implementation. Please describe efforts to disclose this impact assessment and environmental management plan and provide dates.

Plans for setting up underwater trail will be discussed with national and local stakeholders. Meetings will be organized with Public Enterprise for Coastal Zone, Ministry for Tourism and Sustainable Development and local divers club and local tourist organization. The main aim of the meetings will be explanation benefits of setting up underwater trail.

18. **Grievance mechanism:** All projects that trigger a safeguard must provide local communities and other relevant stakeholders with a means to raise a grievance with the grantee, the relevant Regional Implementation Team, the CEPF Secretariat or the World Bank.

Any person or group of person who has a complaint regarding projects activities ("claimants") could raise it to the project manager. Complaints could be raised during regular meetings, by e – mail and phone. All complaints raised will be documented by the project manager, and filed. NGO Green Home will inform CEPF (RIT and Grant director) - every six months, at the time of the performance report under the section "safeguard" of the report - Within 15 days in case of complaints that are of particular importance. Should no solution satisfactory to all parties be reached after step 1, or if the issue cannot be raised initially to the project manager (conflict of interest, desire to remain anonymous) the claimant(s) can raise the complaint directly to CEPF by contacting the (*RIT person in charge, for instance, programme officer*) and the CEPF grant director for the hotspot.

The contact (email, phone) of these persons should be made publicly available to stakeholders and community members. The RIT and CEPF Grant director will then communicate with claimant, the organization in charge of project and other stakeholders if needed, within 15 days, to find out solutions satisfactory to all parties.

Prior to the implementation of the project, meeting with the project partners will be organized to disclose once again the objectives and detailed activities of the project to the local communities. During the meetings with local communities contacts of the coordinator – NGO Green Home, NGO MedCEM and NGO MES, the Regional Implementation Team for CEPF (Birdlife International) and the CEPF Grant Director will be provided to the local population.

The dedicated email account for CEPF (cepfexecutive@conservation.org) will be mentioned, for grievances sent by email. We will share all grievances – and a proposed response – with the Regional Implementation Team and the CEPF Grant Director within 15 days. If the claimant is not satisfied following the response, they may submit the grievance directly to the CEPF Executive Director at cepfexecutive@conservation.org or by surface mail. If the claimant is not satisfied with the response from the CEPF Executive Director, they may submit the grievance to the World Bank at the local World Bank office.