# ZEWSGES Beach Litter Monitoring No. 01 – Georgia (Civitas Georgica Partner)

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| **Name & position of main author:** | Ms. T. Tsamalashvili Marine Environment Coordinator, Georgia |
| **Name & position of contributors:** | Mr. Mamuka Gvilava (ZEWSGES Project coordinator)<br>Mr. Alexandre Kalandadze (EEP Coordinator) |
| **Places visited** | Beaches of coastal Guria Region, Georgia |
| **Objective/purpose of field visit:** | • Reconnaissance of beaches of Guria Region<br>• Identification and setting up of survey site<br>• Meeting invited participants of the survey<br>• Training of surveyors<br>• Beach litter monitoring |
| Summary: Mr. Mamuka Gvilava (BSB CBC ZEWSGES Project coordinator), Mr. Alexandre Kalandadze (Ecosystem Education Programme Coordinator) and Ms. Tamar Tsamalashvili (Marine Environment Coordinator) visited Guria region (Georgia). During the fieldwork, number of sites have been visited (see Map 1) and reviewed according to project provided criteria and monitoring plans. The meeting with participants of beach litter survey was organized in Grigoleti and first training of beach litter surveyors was jointly carried out including testing marine litter monitoring on the selected beech. | |
| **Project name** | ZEWSGES – Zero Waste Strategy For Good Environmental Status – BSB257 |
| **Departure** | 25-01-2019 |
| **Return** | 27-01-2019 |

Marine litter monitoring campaign in Guria region, Georgia had to be carried out by the end of January, 2019. This has been the first planned monitoring action in the framework of the "Zero Waste Strategy for Good Environmental Status (ZEWSGES) – BSB257" project, that has started in August 2018.

Guria Region is located along Black Sea coast of Georgia. Two of three municipalities of Guria Region, Lanchkhuti and Ozurgeti Municipalities have total 22 km long coastline. Beaches in Guria Region are composed of mainly sand and partly gravel (after nourishment) material.

In order to reach project objectives following activities have been carried out:

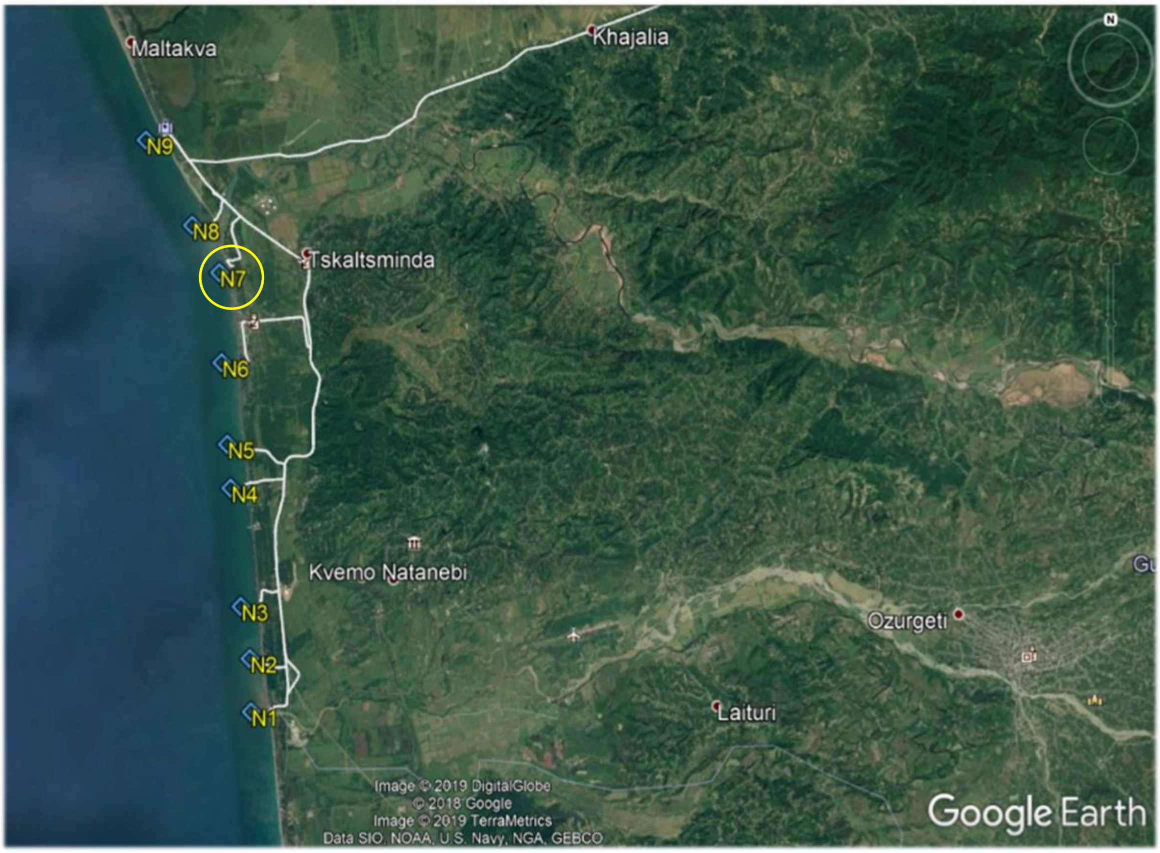
- ✓ "Guideline for Monitoring Marine Litter on the Beaches in the OSPAR Maritime Area" document was carefully studied and agreed that provided methodologies are appropriate to choose for the project implementation in Guria region.
- ✓ Key provisions of the above-mentioned document have been translated into Georgian language and the short guide for Georgian surveyors and teachers/students was prepared and presentations were created for training (Attachment 1).
- ✓ The “OSPAR Marine Litter Monitoring Survey Form” have been translated into Georgian language and agreed for future development and adaptation (Attachment 2).
- ✓ Field work have been carried out and prospective survey sites have been characterised.
- ✓ The local authorities have been informed on the project and discussion meeting was held with the Head of Clean up Service of Lanchkhuti Municipality.
- ✓ Three heads of schools, which are located near the coast in Lanchkhuti and Ozurgeti municipalities have been informed about initiative of beach litter survey training and in particular ecology and/or biology teachers and students interested in marine ecology and environment studies were invited.
- ✓ Beach site was selected and monitoring trial conducted together with trained teachers/students.
- ✓ Short movies for ecosystem education programme recorded with handycam and smartphones.
- ✓ Field work #01 and training of surveyors have been organized during 25-27 January of 2019.

The following program was carries out during the field mission:

**25 January:**
Drive from Tbilisi to Grigoleti (Guria Region), arrival at 23:00, accommodation at hotel "Villa Reta".

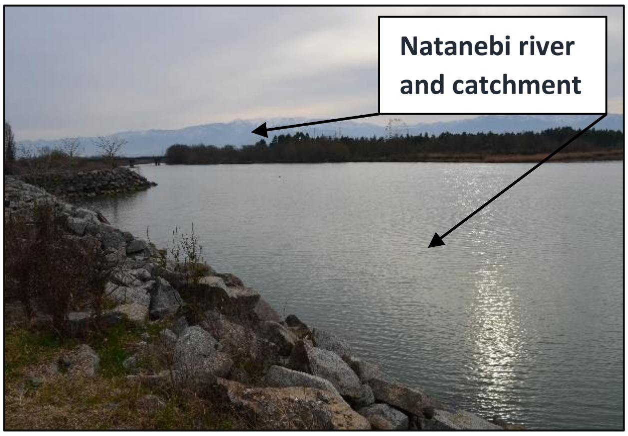
**26 January:**
Preparatory part of the field work was done on 26th January, including the following:

- ✓ Totally 9 beach sites were visited in Guria region and described according to criteria of "reference beach" selection.
- ✓ The project reference beach (site N7, see Map 1) was selected according to OSPAR methodology.
- ✓ Meeting with the head of Lanchkhuti Municipality Clean-up Service was conducted.
- ✓ Series of short movies to be used as education materials were recorded during the mission.




Map 1. Beach reconnaissance sites in coastal Region of Guria, Georgia (selected beach highlighted)

| # | Place Description[1] | Beach Litter Degree | Suitability |
|---|---|---|---|
| 01 | **R. Natanebi Mouth**<br><br>Beach north of the mouth of r. Natanebi. Black sand beach with composition of reworked tuffs, sandstones, porphyrs, andesite, slabs (mainly all sand beaches have the same composition in Guria). Beach width is 50-60 m. Coastline is bordered by river mouth from South. Territory is littered by huge amount of garbage. Main littering source in this area is r. Natanebi via sea action, accumulating litter from all over the catchment. | Very high degree of beach litter. | Not suitable due to very high amount of litter coming mainly from r. Natanebi and its entire catchment. |




[1] Names to beaches are given informally by the project staff according to nearby landmarks.

| # | Place Description | Beach Litter Degree | Suitability |
|---|---|---|---|
| 02 | **Laguna Shekvetili**<br><br>Undulating road is leading to the beach to "Laguna Shekvetili" hotel from the highway. The road is littered by human activity waste. Touristic active beach is composed from black sands, no buildings are present in the 40-60 m wide and more than 160m long beach zone. Summer homes and cottages border beach zones from east. Garbage and littering mainly is resulted from human activities (mostly arriving from catchment via sea action). This part of beach reportedly is cleaned during the summer period by municipality and hotel owners. | High degree of beach litter. | Not suitable due to the municipality and business clean-up activities seasonally. |

| # | Place Description | Beach Litter Degree | Suitability |
|---|---|---|---|
| 03 | **Blue Hotel**<br><br>The straightway from main road cross dunes and artificial forest near the seashore area near famous Black Sea Arena facility. The beach is composed of grey sands. From the east a cottage and summer house zone border the seashore. A number of hotels are located direct on beach and some summer constructions and also summer houses are placed in the beach zone. Beach width is 30-40 m. During touristic season clean-up activities are very intensive but during the winter no clean-up results have been mentioned. | Medium degree of beach litter | Not suitable due to the high level of human activities, very active tourist development and construction in the area and also frequent clean-up activities expected. |

| # | Place Description | Beach Litter Degree | Suitability |
|---|---|---|---|
| 04 | **Kaprovani 1**<br><br>Seashore is bordered by artificial forest from the east. Beach width on this part of the seashore varies between 80-90 m. Beach is composed mainly of grey sands with quartz. This is an active place used for importing large live trees via the sea (see pictures below). Littering is mainly from catchment sources deposited by sea action. | Medium degree of beach litter. | Not suitable due to the high level of human activities and also frequent clean-up expected due to proximity of Paragraph hotel and its owner's property. |






| # | Place Description | Beach Litter Degree | Suitability |
|---|---|---|---|
| 05 | **Kaprovani 2**<br><br>The beach is bordered by abundant artificial forest from the east. The seashore is composed of grey sand, width of the beach varies between 20-30 m. The high-density settlement is located in the artificial grove and is cleaned-up by municipality mainly during the summer. | Medium degree of beach litter. Stagnant waters with lot of waste clogging the streams flowing towards the sea. | Not suitable due to the high level of human activities and also frequent clean-up activities. |

| # | Place Description | Beach Litter Degree | Suitability |
|---|---|---|---|
| 06 | **Hotel Elite, Ureki**<br><br>Beach with high human activities (track marks and clean-up activities during the summer). Composed of black sands, beach width is 40-50m. | Low-medium degree of beach litter | Not suitable due to the high level of human activities and also frequent clean-up activities. |

| # | Place Description | Beach Litter Degree | Suitability |
|---|---|---|---|
| 07 | **Kvavilnari**<br><br>Beach is located far from the central road. 300-350 m dune space separates grey sand beach from habited area. Beach is bordered by private, non-habited property. No buildings or summer houses are presented immediately at the area, though Kvavilnari resort area is adjacent (north). Wetland areas located immediately to the east is nice site for ecosystem education activities as well (wetland ecosystems). | <br><br>High degree of beach litter extending couple of kilometres to the south. | <br><br>Suitable. No active human influence seems visible. EEP activities can be combined with litter monitoring and clean-up activities. Liaison with local authorities needed to refrain from clean-up to support monitoring effort. |






| # | Place Description | Beach Litter Degree | Suitability |
|---|---|---|---|
| 08 | **Fisheries**<br><br>Former fisheries farm place. A large number of mariculture pen cages found in the beach zone (at least 5 counted visually). Cages did not seem very functional and can be considered as largest size beach plastic litter at least in Georgia ☺. beach is composed of grey sands, width is 40-50 m. At this moment beach is not active, but in few months economic activities may start on the territory. | Medium-high degree of beach litter | Not suitable due to the high level of human activities and possible economic activities. |




| # | Place Description | Beach Litter Degree | Suitability |
|---|---|---|---|
| 09 | **Cafe**<br><br>This beach is not located far from settled area and road, grey sand beach's width is 40-50 m. From the beginning of our research this place was considered as one of the most suitable place for beach litter monitoring and clean-up actions, because of following reasons: last time the clean-up activities were carried out on this territory two years ago and project staff as well as students (from local schools) were familiar with the area. From our experience place was appropriate choice for beach monitoring and clean-up activities, beach visit and place examination show that recently large amount of gravel have been spread on beach (apparently to mitigate beach erosion, but many locals are unhappy as visitors are deserting the beaches and go elsewhere for sand). Above mentioned circumstances put suitability of described place under the question. | Medium degree of beach litter (apparently buried under gravel). | Not suitable due to the high level of human activities and change in the natural beach morphology patterns. |

**26 January**: (cont'd)

- ✓ Other activities: Meeting with local authorities and local organization representatives carrying out the clean-up services on the beach

  After the field work, meeting with Mr. David Tsuladze, Head of Lanchkhuti municipality clean-up service was organised. Meeting was attended by municipal council members and local non-government organisation representatives. Short verbal presentation of the project initiative was made, describing project's goals and objectives for local authorities. which have been interviewed about ongoing similar projects and clean-up activities in the region. In addition to cleaning municipality bins (once per week) the seashore clean-up activities are organized by Lanchkhuti Municipality. For this, clean-up service uses special vehicles for beach clean-up. Mainly municipality and non-commercial beaches are cleaned-up by municipal services.

**27 January:**

10.30 – 11.30: Training of beach litter monitoring surveyors

- ✓ The training was attended by Lanchkhuti and Ozurgeti schools, teachers and students. Totally 3 schools (from Ureki, Supsa and Tskaltsminda) were participating (one teacher and two students from each school), also representatives of Lanchkhuti municipality and local NGO attended the training (see participant list in Georgian and English attached).

  First of all, project main goals and objectives were described to participants (Mr. M. Gvilava), afterwards, Mr. A. Kalandadze talked about the educational part of the project and described our future actions and plans with participants. Finally, Ms. T. Tsamalashvili introduced marine clean-up component of project, conducting training in marine litter monitoring activities (Attachment 3). Also, Mr. M. Gvilava made an instruction on safety measures during monitoring and all participants has signed the safety induction document (Attachment 3). After the training all participants went to selected area for marine/beach litter monitoring action.




12.00 – 16.00 Visiting selected beach and pilot clean-up campaign.

✓ Recording of marine litter and filling forms, weighting/measuring marine/beach litter.

Beach litter monitoring action have been conducted on the selected Beach #7 (Kvavilnari). The beach litter was collected from the 100-meter-long seashore, waste have been sorted according to the types and questionnaires have been filled out (Attachment 2). The trash was thrown into the trash bins and taken out of the site with vehicles and disposed into municipal waste containers.






**Conclusion and results**

- ✓ From the visited and above described beaches beach N7 have been chosen as a reference beach for monitoring and clean-up activities. Beach is located on the border of Lanchkhuti and Ozurgeti municipalities, which is another argument for selection. Reference beach is bordered by private property, but is uninhabited and with low human activities rate. From the east, natural habitat[2] with wetland flora and fauna is located on lands of private owners.

- ✓ Due to the high level of litter the 150 m long beach have been chosen as reference section (tip: engage permanently at least 3 schools consisting of a teacher and 3 students each team to monitor 50 m wide sections and then summarise data to report for 150 m reference beach).

- ✓ The marine litter surveying training was carried out for school teachers and students.

- ✓ The beach monitoring and clean-up actions have been organized in collaboration with local government, NGO, school teachers and students.

- ✓ Due to the high littering of selected beach and low human activities in the area, it could be concluded that the most of the litters come from the sea, originating from river catchments.

**Main points to discuss and future actions**

- ✓ Beach monitoring questionnaire can be reworked and adopted to Georgian reality (if needed).

- ✓ The long list of paragraphs makes beach clean-up and monitoring process complicated (tip: we are going to prepare illustrated signage of litter typology to facilitate collection and separation of all beach waste types).

- ✓ It is difficult for two people to do litter collection and monitoring counting process at the same time due to the high amount of waste on beach. It is recommended to involve group of four persons: two engaged in litter collection, one separating litter types, one filling questionnaire data (tip: instead of plastic bags to use durable multiple use large plastic bowls with handles).

- ✓ According to the project methodology, monitoring of the beach should take place once per season. Is it necessary to clean up the whole part of the reference beach during monitoring? If yes, it makes some organizational difficulties, if no, how can we define the real number of littering during next monitoring action? (tip: in case all litter cannot be collected conduct clean-up action next day on selected beach to render it completely clean for the next season action.)

- ✓ Is it necessary to clean up target area from all litter for better monitoring or start from existing littering situation? (tip: allocate fixed time e.g. 2 hours for data collection to avoid sun/heat.)

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[2] This brings additional interest to the place from the point of view of ecology and environment.