Environmental elements define the natural framework of a rural area of study. These must be taken into account in any agrarian analysis, even if the area is highly anthropized. The emphasis to be put on each of these elements should be decided by performing an initial reading of the environment in a first visit to the field. In this visit, the analysis would decide if, for example, geology deserves a deeper analysis than just a few notes or if soils are likely to play a crucial role in rural improvement perspectives. For instance, a flat sedimentary rural area could require far less geological analysis than a rural area near ores or in a very anfractuous region. Conversely, agricultural areas affected by soil degradation require different methods of analysis than soil degradation in forest or recreational areas.

Several tools can help to prioritize the importance of each element in the analysis:

- Regional geographical monographs are a privileged source of expert knowledge on many areas, but they are not always available.
- Meetings with the local people can also help to provide a first overview of the relevant natural and anthropic elements.
- Research on information systems, literary reviews and trip’s taken to the area to carry out field analyses can also help to provide a first idea on what must be investigated and to what extent.

A deeper study would require specialized (technical) analyses. The work of the rural analyst is to not only cover all aspects of the investigation, but to be able to select and coordinate several experts. They must provide an integrated approach using their findings and propose recommendations to the ‘decision-makers’. In order to achieve this, one must possess a deep understanding of several fields and have a clear idea of what is needed to construct a synthesis. It would be worthless, for example, asking a Pedologist for a complete soil characterization if the analyst does not know what a ‘fluvisol’ is and its relevant importance in agriculture. A multidisciplinary talent is required; a skill which can, with practice, be developed. The analyst does not need to be an expert in every field, but should be able to co-ordinate and integrate all factors involved.

It is advisable to be systematic in the analysis of environmental factors. This chapter provides a minimum set of elements to be considered by the analyst. This means
that it is possible that some other elements appear in the analysis of a given area, but the elements described here have to always be considered. Also, cross-relations between ought to be examined. This task may seem tiresome and repetitive, but it is essential for a comprehensive analysis.

This section provides several items that the analyst should use to construct his own checklists. An initial (careful) consideration of all of them and their cross-relation can take hours or days, and the actual analysis of the most relevant of them can take weeks of hard work, but this procedure presents two major advantages compared with other approaches. First, it provides the analyst with a guide that helps to avoid forgetting crucial aspects that can be hidden at the first sight. Secondly, this task generates objective documents that can be used to make the case for the final proposals. An example of the first situation was a case in which a rural area had a promising large extension of fertile riparian land to be used as new agricultural area. The edaphological analysis showed good prospects for the required diversification of the local economy by cultivating fresh vegetables for the regional market. The hydrological analysis showed that irrigation was guaranteed and sustainable, but two other reports shown that a) the economy of the area would be heavily dependent on these crops and b) there was a return period for floods of about 25 years for the area, with the potential of devastating effects including personal losses. The analysts balanced this (and other) information and presented the community with the opportunities and risks involved in such a decision. Mitigation strategies were thus developed in case of a positive decision on the diversification option being made, including insurance cover and a primitive (but effective) early warning system. It is doubtful that a disorganized appraisal of the situation would have revealed all these elements, considering that the flood hazard was almost unknown to the local people. A careless approach would have resulted in severe losses for the newly-developed local diversified economy beyond its recovering point, and even in human casualties. The professional obligation of thinking in each and every topic can avoid terrible mistakes. Besides, this protocol provides a learning curve for the analyst. It is true that many factors can be overseen, but if a guide is followed, the probability of these mistakes greatly decreases.

The environmental elements checklists are not only a binary, yes/no matrix to be fulfilled. Each element to be considered develops itself so the analyst should also considerer the scheme he needs to provide to the professionals in order to acquire further information from them. Specific questions such as the persistence of snowfall or hail would not be obvious topics to tackle for the climatologist, so they have to be specifically asked for. If the analyst is concern about potential economic impacts of changes in the neighboring areas, the economist will have to provide a report on this kind of sensitivity for the rural community. While most of these issues would naturally appear in the professional reports, it would save time and money to provide the consultants with a guide on what is expected to be learnt with their expertise: a set of tables, forms and documents suitable to be integrated into presentations and reports would help in the advanced stages of the project.