Q1) What are the selective pressures I want to study?

It depends on the studied population, the characteristics of the study area and on the interests of the researcher. For sheep from Morocco for example, it is probably worth considering variables linked to temperature, rainfall and altitude, since it is a large country with a very contrasted landscape (coasts, mountains, desert).

Q2) What is the spatial extent required?

This is usually decided prior to sampling. The idea is to choose a study are large enough to capture meaningful environmental variation, but not too large so that the studied population is interconnected. In our case, we already know that samples comes from the Morocco region, so all the environmental descriptors must cover this area.

Q3) What is the spatial resolution required?

This is often linked to the extent of the study area and to the characteristic of the species. In our case for example, Morocco is a quite large country and sheep are not sessile species. For these reasons a resolution below the km would probably bring a level of detail which is not necessary. Moreover, consider that the higher the resolution the higher the computational effort required.

Q4) What is the temporal resolution and extent required?

Here it is important to consider the characteristics of the studied species and of the landscape of interest. For example, let's say that we are interested in the effect of temperature, should we use the yearly average temperature or rather the temperature in a particular season? Moreover, on how many years should we calculate this average? Complex and mobile animals tend to have a slow evolution (compared to bacteria, for example) so we probably have interest in calculating average temperature for the longest period available. Concerning the resolution, it is usually a good decision to use multiple ones (yearly and seasonal).

Q5) What does this variable represent?

This database provides accurate descriptions on what each variable corresponds to.

About this dataset

| Basic | Intermediate | Advanced |

Looking at Earth from outer space, clouds are easy to spot. Clouds are draped all around Earth like bright white decorations. Clouds are important to scientists because they reflect the Sun's light back to space and give shade to the surface. They also bring rain, which is important because all plants and animals need freshwater to live. These maps made from NASA satellite observations show how much of Earth's surface is covered by clouds for a given day, or over a span of days.

Q6) What differences do you expect between the description of a landscape and a seascape?

In seascape studies, the water medium dilutes environmental variation in a completely different way, compared to an out-of-the-water situation. For instance, temperature usually depends on proximity to the equator, but sea currents can create corridors of hot or cold water that do not follow this rule. The same can be due to the seascape profile, low depth pools can be heated more quickly than open ocean patches and at 30 meters of depth we can have a completely different environmental situation, compared to the surface. Another important feature of seascape is seasonality, which can be completely different from the one observed on land. This Riginos et al. paper provides good ideas on how to describe a seascape: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5804261/