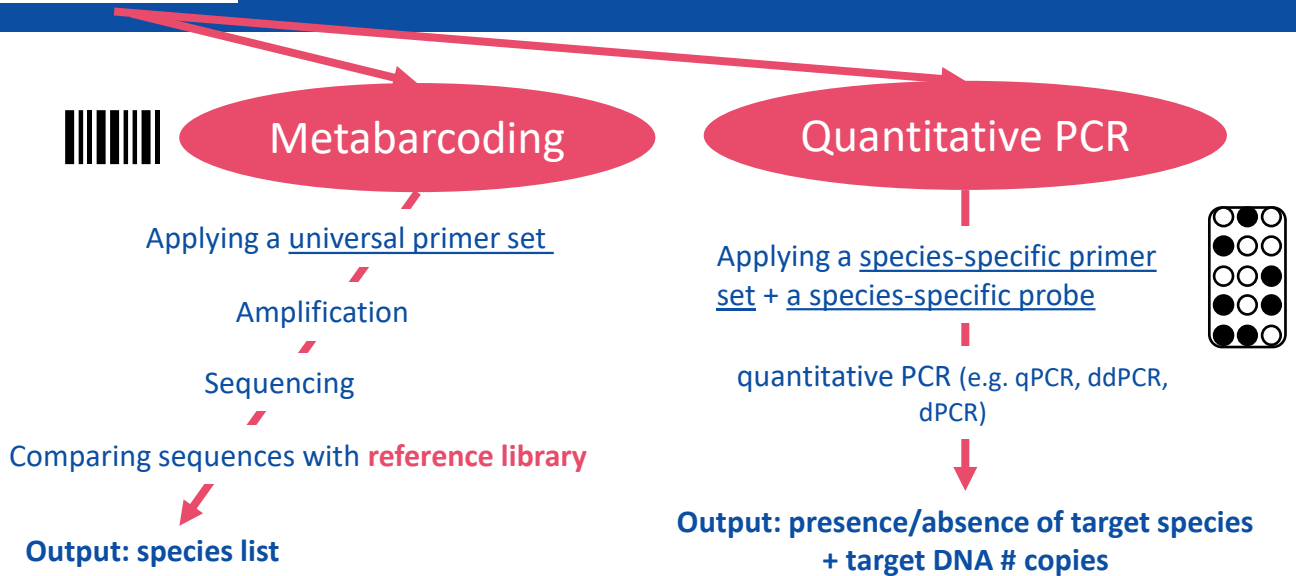


Detecting DNA: metabarcoding vs. qPCR

HOW can DNA of species be detected?

Detection of species is based on the presence of short DNA sequences that are unique to the species to be inventoried (the target species). These are detected and multiplied (amplified) in a PCR (Polymerase Chain Reaction). The detection process can be approached in different ways, depending on the technology used.



HOW do you decide what method to use?

	metabarcoding	qPCR
Number of target species	Hundreds of species can be detected in a single performance.	Each target species requires a specific assay. Max. 5 species can be analyzed in a single performance.
Costs	Limited costs, especially when using eDNA samples (water). Results take longer than qPCR.	The more species to be detected, the higher the costs, but it can still be cheaper and faster than metabarcoding (results within 2 hours, once you have the DNA).
Sensitivity	Requires enough DNA + a well curated reference library	High sensitivity, detection of low concentrations of DNA (especially with dPCR)
Monitoring goal	Diversity monitoring, environmental impact analyses, community studies, NIS detection	Detecting NIS, rare and protected species, studying closely related species