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High Andean Wetlands, climate change and ecosystem services – What do we know?

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Research in high mountain regions has been intensified over the last decade due to e.g. increased concerns about how climate change might affect those regions containing fragile and often remote ecosystems. Wetlands in high mountain regions belong to a kind of vulnerable ecosystems, which have been studied also in the Andes. We systematically gathered information derived from literature on wetland types within the tropical part of high Andean grasslands and shrublands (above tree line) also known as Páramo (northern part) and Puna (southern part). We applied a keyword search on two major global citation database resulting in 230 records from 1979 until present. Here, we found over a hundred peer-reviewed publications focused on High Andean Wetlands providing information on wetland types and geographic references of their respective study sites. Most studies were conducted within the Puna and were related to peatlands. High Andean Wetlands are often seen as providers for certain ecosystem services (ES). Results indicate that current knowledge is mostly based on short-term studies at single-site scale. Thus, not all ES that are assumed to be related to High Andean Wetlands are sufficiently documented by scientific work. Therefore, we present preliminary results of currently conducted studies addressing ES provided by High Andean Wetlands fostering our knowledge and closing still existing knowledge gaps.