

Appendix A

Ebro Basin

A.1 Ecologic Regions

Hydrology	Moderate discharge (180hm ³ /a), nival regime, high level of suspended matter
Geology	Largely siliceous rock with isolated intrusions of limestone
Morphology	High altitude (800-900m), Strong slopes (40%), Strahler number 1-3, draining area (200km ²)
Climatology	Low temperatures (5 °C), high annual precipitation 1500mm)
Human influence	Largely forestal zone only marginally influenced by human influence
Macroinvertebrae	Plecopteros and Tricopteros dominant, elevated biologic diversity
Aquatic chemistry	Low mineralization (<100S), absence of organic contamination

Table A.1: Region 6: High mountain region characteristics as seen in [7]

Hydrology	Moderately elevated discharges (260hm ³ /a), nival regime, high level of suspended matter
Geology	Largely carbonous rock with important silicate intrusions
Morphology	High altitude (600m), Stronger slopes (20%), Strahler number 2-4, draining area (500km ²)
Climatology	Low temperatures (8 °C), high annual precipitation (1100mm)
Human influence	Dominated by forestal zones with low cattle farming as well as human influence
Macroinvertebrae	Important presence of Plecopteros, Efe moropteros and Tricopteros
Aquatic chemistry	Low mineralization (<250S), very low organic contamination

Table A.2: *Region 1: Humid mountain region characteristics as seen in [7]*

Hydrology	Low discharges (130hm ³ /a), pluvial mediterranean regime, high level of suspended matter
Geology	Largely carbonous rock with silicate intrusions
Morphology	High altitude (600m), moderate slopes (15%), Strahler number 1-3, varying draining area (500km ²)
Climatology	Moderate temperatures (10 °C), moderate annual precipitation (600mm)
Human influence	Dominated by forestal zones with 17% surface agriculture
Macroinvertebrae	Rare presence of Plecopteros and frequent Efemoropteros and Tricopteros
Aquatic chemistry	Higher mineralization (500S), low local organic contamination

Table A.3: *Region 4: Mediterranean mountain region characteristics as seen in [7]*

Hydrology	Small discharges ($122\text{hm}^3/\text{a}$), pluvial mediterranean regime, very low level of suspended matter
Geology	Largely evaporized rock with silicious and carboneous sediments
Morphology	Medium altitude (600m), moderate slopes (8%), Strahler number 1-3, harshly varying draining area (1500km^3)
Climatology	Higher temperatures ($13\text{ }^\circ\text{C}$), low annual precipitacion (450mm)
Human influence	Dominated by forestal zones with rare natural state with 25% surface dry and irrigation agriculture
Macroinvertebrae	Very low presence of Plecopteros and frequent Efemoropteros and Tricopteros
Aquatic chemistry	Elevated mineralization ($>500\text{S}$), important local organic contamination

Table A.4: Region 3: Plane region characteristics as seen in [7]

Hydrology	Elevated discharges (2300hm ³ /a), nival regime, low level of suspended matter
Geology	Mixture of evaporized, silicate and carboneous rock
Morphology	Lower altitude (600m), moderate slopes (8%), Strahler number 3-5, larger draining area (6800km ²)
Climatology	Higher temperatures (12 °C), moderate annual precipitation (550mm)
Human influence	Few natural forestal zones with 35% surface dry and irrigation agriculture
Macroinvertebrae	Very small presence of Plecopteros and certain frequent Efemoropteros and Tricopteros
Aquatic chemistry	Moderate mineralization (>500S), important and variable organic contamination

Table A.5: *Region 2: Great river region characteristics as seen in [7]*

Hydrology	Very high discharges (8600hm ³ /a), low discharge variations, very low level of suspended matter
Geology	Mixture of evaporized, silicate and carboneous rock
Morphology	Low altitude (130m), moderate slopes (6%), Strahler number 5-6, very large draining area (46400km ²)
Climatology	Higher temperatures (14 °C), moderate annual precipitacion (420mm)
Human influence	Important influenced forestal zones (40%) with 25% surface dry and irrigation agriculture
Macroinvertebrae	Absence of Plecopteros and Efemoropteros and Tricopteros with elevated frequent
Aquatic chemistry	Elevated mineralization (>800S), important organic contamination

Table A.6: *Region 5: Ebro axis region characteristics as seen in [7]*