



Label River Pearl PLUS: Certification Criteria

As of March 2023

1. Principles

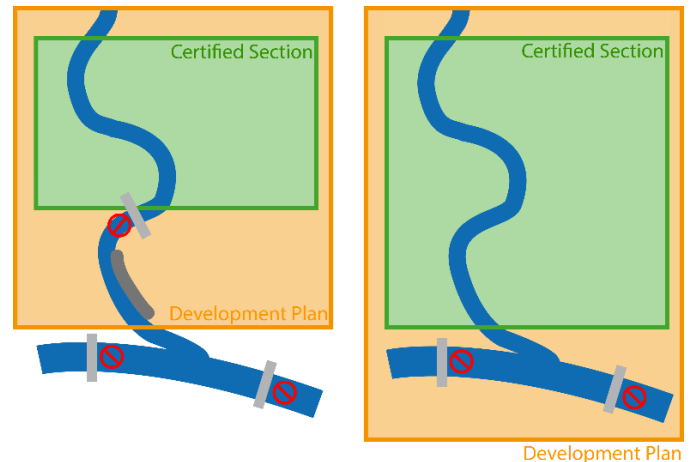
Criteria

The label candidate must satisfy two conditions:

- The watercourse stretch meets the exclusion criteria (cf. chap. 2)
- The development plan meets the requirements (cf. chap. 3)

Duration and perimeter of certification and improvement of the watercourse/catchment area as a whole

- Certification is valid for a period of 5 years.
- A linear river stretch including tributaries is certified (provided that the tributaries also meet the exclusion criteria).
- The upper limit of certified river stretches adjacent to a glacier is the glacier's edge.
- The applying organization must define the stretch to be certified and demonstrate that the exclusion criteria are met.
- The label aspires not only to protect and where necessary improve the labelled stretch itself, but also improve the surrounding area (lower reaches, headwater, side waters, complete watercourse, catchment area). This aspiration is guaranteed through the development plan.
- Ideally, the certified stretch will be extended when the time comes for recertification.
- Revitalised stretches can also be certified. When combined with the development plan, this creates an incentive to improve and enlarge the certified stretch.



Example of an improvement for the purposes of the River Pearl PLUS label. Left: First certification. The upper stretch of the watercourse is certified. Under the development plan, the label carrier undertakes to remove migration barriers and riverbank structures in the lower reaches. Right: Recertification after 5 years. The development plan has been implemented, migration barriers and riverbank structures have been removed. The lower reaches were consequently also certified. In the new development plan, the label holder undertakes to eliminate impairments in the estuarine waters.

Quality control/recertification

- Compliance with the agreement (no deterioration, development plan on track) must be reviewed two years after certification. If there is a subsequent need, a further quality control can be carried out after 3 years.
- If the exclusion criteria deteriorate during the certification period of 5 years to such an extent that they no longer meet the requirements, the label must be withdrawn.
- Criteria for recertification: In principle, the development plan must have been implemented and the exclusion criteria must still be met or exceeded. If measures of the development plan have not been implemented, clarification must be sought to determine if there are verifiable reasons for this. If the measures were not implemented due to negligence, under certain circumstances the label must be withdrawn (cf. chap. 4).
- Quality control is guaranteed by the Association "Gewässerperlen".

2. Exclusion Criteria

These watercourse characteristics were chosen so that there would be only a few exclusion criteria, which an applying organization could demonstrate independently without too much effort.

In Switzerland some of these exclusion criteria (highlighted in green below) are already covered by the "Ecomorphology F - sections" data records and/or the designation of the riverine corridor.

If the watercourse is registered in the ecomorphology and if the riverine corridor is designated pursuant to Art. 41a (1) of the Swiss Waters Protection Ordinance (GSchV), the criteria highlighted in green do not have to be satisfied. If this does not concern the entire candidature section, all exclusion criteria must be observed.

Exclusion criteria highlighted in red must always be satisfied. If the ecomorphology is not defined, the criteria highlighted in green must also be met.

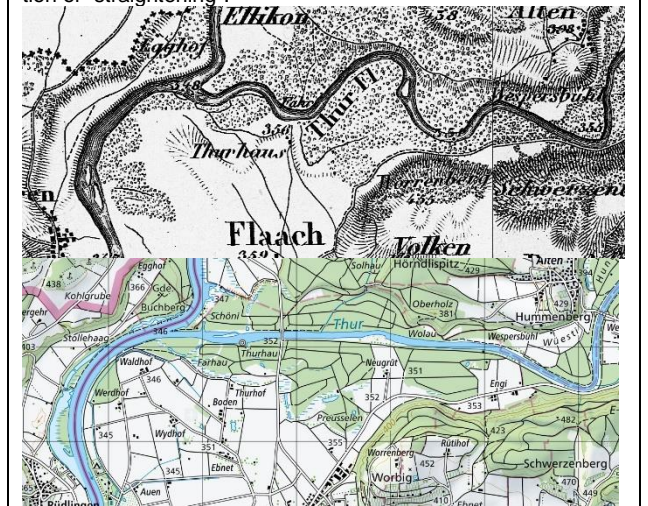
In order to be able to apply the following exclusion criteria (C1, 4, 5, 6, 7 and 12) for the candidate stretch, the stream order must be determined in a first step. The procedure is explained in more detail in the decision tree in Appendix 1.

C1: Ecomorphology – sections (CH only)
Min. 75% of the stretch: Class 1 (natural/near-natural) Max. 20% of the stretch: Class 2 (little impairment) Max. 5% of the stretch: Class 3 or undefined
<p><u>Explanations:</u> Max. 5% of the stretch: Class 3 or undefined, allowing a stretch to be certified despite the existence of certain infrastructure (particularly bridges/crossings). For this criterion, further steps may be necessary due to the stream order (see decision tree Annex 1). Further information on the ecomorphological method: https://www.bafu.admin.ch/bafu/en/home/topics/water/water--publications/publications-wa-ter/methoden-zur-untersuchung-und-beurteilung-der-flie遝gewaesser--oe.html If the ecomorphology is not defined, the criteria highlighted in green must also be met. If the ecomorphology is defined, the accuracy of the data must be reviewed and verified on a field visit.</p>

C2: Riverine corridor
The riverine corridor is designated and farmed in accordance with Art. 41a (1) GSchV (extended riverine corridor).
<p><u>Explanations:</u> If designation has not yet taken place, or has only taken place to a smaller extent, or if there are verifiable reasons why it was omitted, evidence of the extensive farming of a "hypothetical" riverine corridor must be provided by means of the biodiversity curve (for small watercourses) or the Roulier method (for large watercourses), based on the original state. In these cases the extensive farming must be regulated through the development plan.¹ Should designation occur in the period covered by the development plan, the label holder undertakes to ensure that the riverine corridor satisfies the legal conditions set out in Art. 41a (1) GSchV (extended riverine corridor). Farming of the actual or hypothetical watercourse corridor may at maximum be extensive - a condition that must be met, otherwise the label can be withdrawn.</p>

C3: Minimum length
2 km (continuous)
<input type="checkbox"/> Covered by ecomorphology - sections <input type="checkbox"/> Covered by riverine corridor designated in accordance with the law
<p><u>Explanations:</u> If the stretches were shorter, the ecological relevance would be questionable.</p>

C4: Structures/straightening
Max. 5% of the stretch, no artificially buried watercourses, no artificial stretches
<input checked="" type="checkbox"/> Covered by ecomorphology - sections <input type="checkbox"/> Covered by riverine corridor designated in accordance with the law
<p><u>Explanations:</u> For this criterion, further steps may be necessary due to the stream order (see decision tree Annex 1). Exception: Revitalised stretches or now valuable watercourses which have been affected by interventions long ago (e.g. Thur river pearl: the waterways in the Thurauen floodplain have also been straightened now and then) do not come under the definition of "straightening".</p>



C5: Flood defence barriers in the riverine corridor
Max. 5% of the stretch
<input type="checkbox"/> Covered by ecomorphology - sections <input type="checkbox"/> Covered by riverine corridor designated in accordance with the law
<p><u>Explanations:</u> For this criterion, further steps may be necessary due to the stream order (see decision tree Annex 1).</p>

C6: Artificial obstacles; lateral structures <50cm
Max. 1 obstacle/km
<input type="checkbox"/> Covered by ecomorphology - sections <input type="checkbox"/> Covered by riverine corridor designated in accordance with the law
<p><u>Explanations:</u> These include all artificial obstacles and lateral structures less than 50 cm high. If natural migration barriers prevent fish from migrating, higher obstacles also come within this criterion. Although artificial obstacles and lateral structures are covered by the ecomorphology, due to their importance (and their partly incomplete coverage), it is imperative this criterion be assessed. For this criterion, further steps may be necessary due to the stream order (see decision tree Annex 1). Verification in the field has proven to be a very useful tool here and is expressly recommended.</p>

¹ Extensive management according to the working aid (see *German or French version*) (esp. p. 81ff; BPUK, LDK, BAFU, ARE, BLW (eds.) 2019: Gewässerraum. Modulare Arbeitshilfe zur Festlegung

und Nutzung des Gewässerraums in der Schweiz), as well as the use of areas of summer pasture farms (*German/French/Italian*) above the forest boundary, which are eligible for contributions according to Art. 10 DVZ.

C7: Artificial obstacles; lateral structures >50cm (if fish migration were possible)
Max. 1 obstacle/10 km
<input type="checkbox"/> Covered by ecomorphology - sections <input type="checkbox"/> Covered by riverine corridor designated in accordance with the law
Explanations: Artificial obstacles and lateral structures more than 50 cm high prevent migration for the majority of migrating fish species. These must therefore be assessed more strictly than other artificial obstacles and lateral structures. Removal of the obstacle must always be included as a measure in the development plan and the obstacle must then actually be removed. For this criterion, further steps may be necessary due to the stream order (see decision tree Annex 1). If the certification stretch is shorter than 10 km and there are no natural migration barriers below it, no artificial obstacle or lateral structure > 50 cm is allowed. If natural migration barriers within or in the lower reaches of the certified stretch prevent the migration of fish, the criterion needs not be taken into consideration. In such cases artificial obstacles and lateral structures > 50 cm are also regarded as obstacles within the meaning of K6.

C8: Residual flow resulting from hydropower use
No residual flow stretches
<input type="checkbox"/> Covered by ecomorphology – sections <input type="checkbox"/> Covered by riverine corridor designated in accordance with the law
Explanations: -

C9: Other water withdrawals
Max. 20% of the low water discharge Q_{347} Withdrawals for snowmaking are not permitted. Withdrawals for irrigation and/or industrial use that are fixed or possible due to structural modifications are generally not permitted ² .
<input type="checkbox"/> Covered by ecomorphology - sections <input type="checkbox"/> Covered by riverine corridor designated in accordance with the law
Explanations: An overview of illegal/minor water withdrawals must be created (via the development plan). Existing water withdrawals must not have a negative impact on the ecosystem of the watercourse.

C10: Hydropeaking
No hydropeaking
<input type="checkbox"/> Covered by ecomorphology - sections <input type="checkbox"/> Covered by riverine corridor designated in accordance with the law
Explanations: -

C11: Bed load
No bed load withdrawals or traps in the certified stretch
<input type="checkbox"/> Covered by ecomorphology - sections <input type="checkbox"/> Covered by riverine corridor designated in accordance with the law
Explanations: A bed load budget that is as natural as possible must be guaranteed. If relevant quantities of bed load are extracted in the headwater for flood defence reasons, these must be added back to the watercourse. In this case an expert must demonstrate that the bed load budget in the certified stretch can fulfil its ecological function.

C12: Bank vegetation (excluding neophytes)
Poplars and non-site-appropriate coniferous trees must not cover more than 10% of the bank.
<input checked="" type="checkbox"/> Covered by ecomorphology - sections <input type="checkbox"/> Covered by riverine corridor designated in accordance with the law
Explanations: The bank vegetation must be site-appropriate as far as possible. For this criterion, further steps may be necessary due to the stream order (see decision tree Annex 1).

C13: Water quality
The water quality must be moderate to very good on the MSK scale or in the "moyenne" to "très bonne" categories of the Canton of Vaud. ³
<input type="checkbox"/> Covered by ecomorphology - sections <input type="checkbox"/> Covered by riverine corridor designated in accordance with the law
Explanations: Procedure cascade: <ol style="list-style-type: none"> 1. Assessment based on existing measurements/data records 2. If there are none: <ol style="list-style-type: none"> 2.1 Qualitative expert assessment⁴ 2.2 If required: Further clarifications

² Withdrawals for irrigation that are fixed or made possible by structural modifications must be examined in individual cases and may be permissible if:

- the withdrawal leads to ecological added value, given there is no reduction of the ecological value of the watercourse (possible, for example, in the case of suonnen)
- The withdrawal is regulated by a concession or permit, which is suspended by the concession authority if necessary (drought).

³ The method covers general aspect, macrozoobenthos, ecomorphology, chemistry, macrophytes. Macrozoobenthos, chemistry and macrophytes are relevant for K 14.
https://www.vd.ch/fileadmin/user_upload/themes/envi-ronnement/eau/fichiers_pdf/DI-REV_PRE/De_Source_S%C3%BBre_Rivi%C3%A8res_2017.pdf

⁴ According to "Guideline: Qualitative determination of water quality", Verein Gewässerperlen, as of 30.3.2023

3. Development Plan

- The development plan is to be drafted and implemented in a participatory process in which all relevant stakeholders are represented.
- The label aspires not only to protect and where necessary improve the certified stretch itself, but also improve the surrounding area (lower reaches, headwater, sidewaters, complete watercourse, catchment area). This aspiration is guaranteed through the development plan.
- Measures must be defined at catchment area level (minimum catchment area defined by the lowest point of the certified stretch) and must also be checked and planned along the lower reaches of the certified stretch.
- No additional infrastructure of any kind are permitted in the certified stretch in the area of the riverine corridor actually or de facto designated according to K2, not even for information purposes or to raise awareness (barbecue facilities, bathing points, information boards, etc.).
- The development plan guarantees the following:
 - a. The condition of the certified stretch will improve where necessary:
 - i. Existing impairments will be removed.
 - ii. Longitudinal and lateral connectivity (including to non-certified stretches/side waters) will be restored where necessary. If spawning occurs naturally, fish stocking within the certified stretch is to be avoided.
 - iii. The water quality will be improved where necessary.
 - b. Stakeholders and the local population will be made aware of the value of the watercourse. Any conflicts of interest must be resolved and documented.
 - c. Climate change will be taken into consideration in the development of the area.
 - d. Research issues will be clarified where possible.
- The development plan comprises measures covering the following areas:
 - a. Awareness-raising/education (obligatory).
 - b. Measures for the conservation and enhancement of habitats. Local improvements (obligatory, except if the development plan states that they are not necessary). Artificial migration barriers > 50 cm must always be removed in the certified stretch if fish are able to migrate naturally.
 - c. Existing recreation with impacts on water ecology (obligatory, except if the development plan states that they are not necessary).
 - d. Handling of non-native species (if any): Verification and any necessary measures are obligatory. Depending on the severity of the intervention, measures can be omitted.
 - e. Research (optional).
 - f. Measures for the certification process (obligatory): it must be explained how the participatory process will be conducted (including a list of stakeholders) and how the quality control by the association is planned by the sponsor
- The development plan classifies the measures contained in it into three categories (Musts, To be prepared, Nice to have) in consultation with the Association “Gewässerperlen”. This allows more ambitious measures to be tackled even if their implementation will take longer and/or depends on other actors.

Appendix 1: Decision tree stream order for Criteria 1, 4, 5, 6, 7 and 12

