

# Forest Development Plan

Guideline concerning the nationally uniform preparation, design and presentation of the Forest Development Plan



## Imprint

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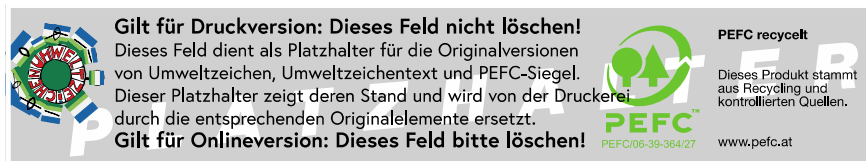
Authors: Alfred Grieshofer, Claudia Wiesinger (Directorate III/3)

Competent experts of the Provincial Forest Administrations

Nikolaus Pedarnig

Overall coordination: Alfred Grieshofer

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## Preface

Austria is one of the most densely forested countries of Europe. According to the surveys of the Austrian Forest Inventory about 48 % of the national territory are covered with forests - that is about four million hectares. Forest area planning aims to present and ensure the effects of forests in the best possible manner; its tasks also include the description and forward-looking planning of forest areas.

The present Guideline regulates the uniform nationwide preparation, form, design and presentation of the Forest Development Plan (“Waldentwicklungsplan”), hereinafter referred to as “FDP”). It was drawn up on the basis of the Guideline version of 2012 under the leadership of the Federal Ministry of Agriculture, Forestry, Regions and Water Management (BML, formerly Federal Ministry of Agriculture, Regions and Tourism), in close cooperation with the competent senior officials for forest area planning in the Provinces and technically involved, experienced project partners. Relevant proposals from several working meetings, from the ongoing experiences that competent authorities and planners made in the course of the preparation and application of the FDP, and from current planning processes in which more detailed statements on individual forest functions, going beyond the FDP, were taken into account.

The main objectives of the adjustment of the Guideline are to strengthen the required objectivity in the evaluation of functions, nationwide uniformity as well as the user-friendliness and up-to-dateness of forest development planning, while optimally using the enhanced technical possibilities in the fields of data management and information provision. On [www.waldentwicklungsplan.at](http://www.waldentwicklungsplan.at), information and planning results from forest development planning can be easily queried, if needed; in this way, an insight on the status quo and the development of the forests of the respective district, Province and for the whole of Austria can be gained “at the push of a button”. The Forest Development Plan is also available as an APP for mobile web-enabled end devices.

At this point, I would like to thank all those involved, in particular the colleagues at the BML, the provincial forest services, the Federal Research and Training Centre for Forests, Natural Hazards and Landscape (BFW Vienna/Innsbruck) as well as the experienced external partners (Unidata Geodesign GmbH) for the large number of constructive proposals they presented and for their committed and patient cooperation.

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# 1 General part

## 1.1 Legal basis

### 1.1.1 Forest area planning in the Austrian Forest Act

Section II of the Forest Act 1975 (Federal Law of 3 July 1975, regulating forest issues, **Federal Law Gazette No 440/1975**, last amended by Federal Law Gazette No 56/2016), hereinafter referred to as “Forest Act”, standardises the task, scope, content and instruments of forest area planning (Annex 1 – Chapter 9.1, Articles 6 - 9 Forest Act).

### 1.1.2 Ordinance on the Forest Development Plan (“Waldentwicklungsplan Verordnung”, abbr. “FDP Ordinance”)

The Ordinance on the Forest Development Plan (**Federal Law Gazette No 582/1997**), hereinafter referred to as “FDP Ordinance”, provides more detailed implementing provisions (Annex 2 – Chapter 9.2).

The core function is the description and foresighted planning of the forest conditions of the federal territory or parts thereof with the overarching goal of optimally and sustainably ensuring the forest effects defined in the Forest Act.

On this legal basis, the present Guideline regulates the uniform federal procedure concerning the preparation, the structure, the content, and the form of the Forest Development Plan, taking into account the associated work processes. The necessary specifications for uniform data collection provide the basis for the subsequent presentation and evaluation of the planning results.

## 1.2 Subject and scope of planning

For the overall plan, the planning area covers the entire federal territory; for the partial plans it extends over the area of a Province or of parts thereof (Article 9, paragraphs 1 and 2 of the Forest Act). This is usually a political district or a “forest district” (“Forstbezirk”). The overall plan is created by the combination, evaluation and presentation of the partial plans.



The main purpose is the evaluation of the functions, including the upper timberline zone of forests, of shelterbelts and basal areas whose new afforestation can contribute to improve the effects of forests, as well as of areas where the separation of forestry, agriculture and alpine farming is advantageous for a better development of the forest effects and the description of forest-relevant facts relating thereto, such as stress, resilience or damage, for these forests. This means that, even though the preparation of the Forest Development Plan focuses on forest areas as defined in the Austrian Forest Act, the preparation of the plan takes into account all significant public interests of relevance to forest area planning and, therefore, also contains technically relevant information for planning outside forests.

The following example illustrates the usefulness of this planning approach which extends over the respective boundaries of forests:

The designation, evaluation and presentation of object-protecting forests in the FDP are impossible without the inclusion and consideration of the objects to be protected (for example buildings, roads) - which, however, are usually located outside or below the forest areas to be evaluated. Only with a comprehensive planning approach which takes into account all aspects of "forest area - hazard process - object" will a technically useful evaluation and designation be possible and plausible.

### **1.3 Objectives, target groups and areas of application**

#### **Main objectives of the present Guideline**

- Provision of nationally uniform specifications for the preparation, submission, approval and publication of the Forest Development Plan in Austria.
- Provision of a comprehensible basis for planning and of decision-making aids for the execution of the Forest Act and, in this connection, especially for the expert activities of the bodies of the Forest Engineering Service in Torrent and Avalanche Control, for example as regards clearing procedures or the preparation of expert opinions.
- Ensuring objectivity in the assessment of the values and representation of the areas with identical value of forest functions (functional areas, circular functional areas).
- Creating a comprehensible, objective basis for the evaluation and presentation of the results of forest development planning in Austria.
- Improvement of the timeliness of forest development planning.
- As a long-term and overarching objective: Ensuring the forest effects defined in the Forest Act on a sustainable basis.

## Target groups

- Forest authorities which are in charge of the preparation, adjustment and approval of the Forest Development Plan, or which use or consider it when carrying out their tasks
- Forest managers and forest owners
- Planners using or taking into account the Forest Development Plan in their tasks and in project planning (for example experts from the fields of forestry, torrent and avalanche control, agriculture, general area planning, water management, hunting, nature conservation, tourism, energy management, subsidisation)
- All citizens who are interested in the roles, functions, effects of forests or of forest area planning and look for information about Austria's forests.

## Areas of use and application of the Forest Development Plan (selection)

- Within the framework of **forest law enforcement** for the comprehensible identification and the provision of technically objective reasons of public interest in forest conservation (for example in clearing procedures or procedures of agricultural authorities)
- In projects concerning **provincial land use planning** or **traffic planning** or other **spatial planning** in which the conditions and functions of forests are taken into account (EIA procedures etc.)
- As a reliable source of basic information on current forest conditions and their developments on district, provincial or federal level as well as within the framework of international working processes (for example Alpine Convention)
- As a steering tool for the prioritisation of protective forest areas with an increased demand for tending, regeneration or conservation
- As a basis for further detailed planning on selected topics (for example for technical forestry plans or other special plans relating to forests)

## The Forest Development Plan is more than just a collection of maps and data!

The Forest Development Plan, therefore, fulfils several purposes, both at the level of the respective sub-plan (partial plan of political district or forest district) and in its forms as overall provincial or nationwide plan: For the target groups, the collection of maps and data constitutes a valid and exclusive **source of information** and a **planning instrument** for the entire forest and its technically relevant environment. The Forest Development Plan can also be regarded as a “**business card**” concerning forests and their significance and development in the individual planning region.

Over the past decades, the Forest Development Plan has become an **established forest-political planning instrument**. It provides an objective, technically sound and well-organised overall view of the development and the status of forests. In addition, it describes the steps that will be necessary in the future to ensure the forest effects in the district for the long term and provides a **central basis for further technical planning** (for example technical forestry plans or detailed special plans) on selected issues.

On federal and on provincial level the data and results obtained from forest development planning have been a **precious and objective decision-making aid for forest-political course-setting** for decades.

The Forest Development Plan is, therefore, an important instrument for presenting Austria's forests with their functions on international and on European level.

The present Guideline provides the mandatory framework for the required uniform national evaluation methods, the structure and the form of presentation of the individual partial plans of the Forest Development Plan but, in terms of **scope, up-to-dateness (indication of sources, internet links)** or **level of detail (e.g. textual part** of the respective Forest Development Plan), leaves **sufficient margin** for the presentation, description and the reference to specific **locally or regionally important** contents.

## 2 Definitions

### 2.1 Planning unit

Article 3. (1) FDP Ordinance The partial plan shall extend over at least one planning unit; it can also cover the sum of several planning units, but not more than a Federal Province. (2) The planning unit is the local area of a political district or of a district forest inspection body (“Forstbezirk”).

### 2.2 Forests and effects of forests (Forest Act Articles 1 and 6)

Article 1 (1) Forest Act Forests with their effects on habitats of humans, animals and plants constitute an important basis for Austria’s ecological, economic and social development. Their sustainable management, tending and their protection lay the foundation for safeguarding their multifunctional - productive, protective, beneficial and recreational - effects.

**In the Forest Act, the effects of forests are defined as follows:**

Article 6 para. (2) sub-para. 2 lit. a through d Forest Act

the productive effect, i.e. in particular the economically sustained production of wood as a raw material, the protective effect, i.e. in particular protecting against elementary risks and harmful environmental influences as well as maintaining the resistance of the soil against rainwash and drift, scree-formation and landslips, the beneficial effect, i.e. the influence on the environment, especially on the balance of climate and water regime, on the purification and renewal of air and water, the recreational effect, i.e. in particular the effect of forests as recreational areas on those visiting forests.

## 2.3 Forest functions

Forest functions are the subject-matter of presentation and planning in the Forest Development Plan. Details concerning the form of presentation are specified in the **Ordinance on the Forest Development Plan (“Waldentwicklungsplan-Verordnung”**, abbr. “FDP Ordinance”; Federal Law Gazette 582/1977) and, based on this Ordinance, in the present Guideline.

## 2.4 Functional area

**A functional area is the spatial unit of areas in which the individual functions are of equal value** (Article 5 para. 1 FDP Ordinance). It is the central area unit in forest development planning, in particular as regards the qualitative assessment and the presentation of the forest functions, both for the respective partial and for the overall plan on federal level.

To be considered in the Forest Development Plan, functional areas must have a **minimum size of 10 hectares**. Smaller areas which are of particular importance can be displayed using symbols. The location and the shape of the functional area have to be determined through on-site inspection or local knowledge corresponding to the functions. The size of the functional area is calculated using the Geographical Information System (GIS). Small-scale, technically relevant particularities within one functional area are depicted using specific symbols (circular functional area or pointer area).

Since forest areas are often small or interrupted by non-forest areas, but the dissected forest areas are of equal value, it is necessary and common practice that a functional area can also include non-forest areas. The functional area is, therefore, the spatial, coherent unit of forest areas containing the forest areas with identical value. This, however, does not rule out that the spatial unit includes also non-forest areas.

If a forest develops on an area which was not covered by forest at the time of evaluation, this forest shall be assigned the code of the functional area in which the forest is located.

**Areas in which the respective functions have identical values** are, therefore, as a rule combined into **one forest function area**; **however, if there are different reasons** for the same code, a **delimitation is possible** (Example: Code 121: 1. Reason W 2: Drinking water protection, 2. Reason W 2: Balancing effect on the climate: Delimitation of a separate functional area possible).

The cartographic and coloured representation of the key function in the map of forest functions (FDP map) is made on the forest areas of the respective forest function area according to the Forest Layer.

This is particularly true also in agriculturally utilised areas or residential areas. Smaller, scattered forest areas are combined into larger functional areas where they have equal functions that, from a forest point of view, are to be managed in the same way (for example at high altitudes or on valley floors). Any afforested or newly established areas within a functional area will automatically get the same rating for its functions.

## 2.5 Circular functional area

**Circular functional areas** symbolise one of the four forest functions **within a functional area** which, **in any case**, have forest functions **deviating** from the rating of this functional area and **which are smaller than or equal to ten hectares**.

## 2.6 Pointer area

Pointer areas **always** appear on the **Forest Function Map (FDP map)** and symbolise an area **smaller or larger than 10 hectares**. They address specific planning issues or object categories.

A distinction has to be made between pointer areas whose presentation is **mandatory** (see Chapter 7.2.1 Pillar A) and others, whose presentation is **optional** (see Chapter 7.2.1 Pillar B).

- Pointer areas symbolise planning issues or object categories within **one or several** functional areas.  
They serve to clarify either
  - the **derivation of the key function chosen** for the functional areas concerned or
  - the **deviation from the code** of the surrounding forest function area

## 2.7 Forests receiving special treatment - Protective forest, definition

Article 21 (1) Forest Act Site-protecting forests (forests located on specific sites, referred to as “Standortschutzwälder”) within the meaning of this Federal Act are forests which are located on sites endangered by the eroding forces of wind, water or

gravity, and which require special treatment to protect the soil and the plant cover and to ensure reforestation. Site-protecting forests include:

1. forests on wind-blown sand soil or drifting soil;
2. forests on sites with a tendency towards karstification or on sites that are particularly prone to erosion;
3. forests on rocky, shallow-grounded or steep locations if their reforestation is possible only under difficult conditions;
4. forests on slopes where dangerous slope slides might occur;
5. the forest cover in the upper timberline zone (“Kampfzone”);
6. the forest belt immediately bordering the upper timberline zone.

(2) Object-protecting forests (“Objektschutzwälder”) within the meaning of this Federal Act are forests which protect humans, human settlements or facilities, or cultivated soil, in particular against natural hazards or injuring environmental impacts and which require special treatment to gain and ensure their protective effect.

(3) The provisions on object-protecting forests shall also apply to the forest cover in the upper timberline zone if the latter offers a profound protective effect within the meaning of Article 6 (2) lit. b.

## 2.8 Upper timberline zone, shelterbelts

Article 2 (1) Forest Act The provisions of this Federal Act shall also be applied to forest plant cover in the upper timberline zone (“Kampfzone”) and to shelterbelts, irrespective of the nature of use of the basal areas and the site structure of the plant cover.

(2) The upper timberline zone is deemed to be the zone between the natural border of forest plant cover and the actual border of the closed tree cover.

(3) Shelterbelts are lines or rows of trees or bushes which primarily serve to protect against damage by wind, especially for agricultural plots, and to hold snow.

## 2.9 Protective forests declared by official notice (“Bannwald”)

Article 27 (1) Forest Act Forests of the following kind shall be declared protective forests by official notice:

1. Object-protecting forests which serve to ward off directly certain dangers from humans, human settlements or facilities, or from cultivated soil,
2. forests whose beneficial effect takes precedence over the productive effect, and
3. forests which serve to directly ward off dangers resulting from the condition of the forest or its management, where the economic or other public interest to be safeguarded (purpose of declaring a forest a protective forest by official notice) proves more important than the disadvantages associated with the restriction on forest management resulting from such declaration (“Bannwald”).

(2) Purposes of declaring a forest a protective forest, as referred to in paragraph (1), shall be in particular

- a. protection against avalanches, rockslide, rockfall, snow displacement, landslip, high water, wind or similar dangers,
- b. warding off dangers caused by emissions,
- c. the protection of medicinal springs and of tourist locations and conurbations from impairment of the needs of hygiene and recreation, as well as ensuring the necessary afforestation of the environment of such places for these purposes,
- d. securing a water supply,
- e. ensuring the usability of traffic facilities and energy supply systems,
- f. ensuring the defensive effect of national defence systems,
- g. protection against dangers resulting from the condition of the forest or its management.

## 2.10 32 a. Forests with special habitats

Article 32a. (1) Forests with special habitats (biotope protection forests) are natural forest reserves based on private-law agreements, forest areas in national parks, or forest areas located in nature conservation areas or in conservation areas designated



by law, ordinance or official notice in accordance with Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (OJ L 206 of 22 July 1992, p. 7) or in accordance with Council Directive 79/409/EEC on the conservation of wild birds (OJ L 103 of 25 April 1979, p. 1).

# 3 Drafting of the plan–data collection–evaluation

The partial plan has to be prepared by the Provincial Governor (the competent provincial forest service) and submitted to the Federal Minister in charge of forestry for approval.

The partial plan has to be adjusted to the respective actual status of development at regular intervals (Article 9 Forest Act). Such adjustments are made at **revision intervals of 10 years**. The approved Forest Development Plan **remains valid as long as no revised version (adjustment) has been devised** according to the requirements of the present Guideline **and the necessary approval has not been granted**. Should the revision interval be delayed for practical reasons, the existing Forest Development Plan will remain valid as well. The provincial forest service shall inform the Federal Ministry of the delay and state the reason for this.

The Forest Development Plan shall be drawn up, or revised, by a forest manager (“Forstwirt”) (Article 105 para. (1) sub-para. 3 Forest Act). This shall also be mentioned at a suitable place in the analogous partial FDP plan (for example at the start of the partial plan, where the author’s name is indicated, see also Forest Act as amended in 2002, Article 9 para. (2)).

According to Article 102 para. (5) lit. (h) Forest Act the **Forest Engineering Service** in Torrent and Avalanche Control (WLV) shall participate in the preparation of plans and monitoring systems that relate to catchment areas (Article 99 Forest Act). It is therefore necessary to **contact** the competent WLV office (Regional Headquarters, in German “Gebietsbauleitung”) when drawing up or revising the partial FDP.

For example, for the delimitation of functional areas in this field, the spatially relevant areas (“raumrelevante Bereiche”) designated in Hazard Zone Plans of the WLV or of the Federal Water Engineering Authority (“Bundeswasserbauverwaltung”), or digital zoning documents of the municipalities can be used. The offices of the Forest Engineering Service in Torrent and Avalanche Control can, at any time, make the designated “spatially relevant area” available in digital form, both to individual municipalities or on district or provincial level.

**A revision comprises the following main activities:**

- Assessment in the field and entry of the data into the database ([www.waldentwicklungsplan.at](http://www.waldentwicklungsplan.at))
- Entry of the geometry data from the working map into the GIS (in most cases done at the Office of the Provincial Government) and verification by the creator of the plan)
- All geometry data are uploaded via the internet portal [www.waldentwicklungsplan.at](http://www.waldentwicklungsplan.at).

This is followed by the drafting of the textual part and obtaining the comments of the provincial area planning bodies on the revision carried out, as well as the coordination of the functional assessments of functional areas located on the district boundaries with forest services of the neighbouring districts.

After the draft of the revision has been completed, the competent Office of the Provincial Government checks it for misunderstandings and spelling mistakes and clarifies and corrects any discrepancies between the textual part, the database and the map section.

Only after this initial check, the draft is submitted to the Federal Ministry for review in digital and analogue form. This review at the Federal Ministry as well as any suggested corrections and adaptations are documented.

The communication of the proposed corrections to the competent technical directorate of the Office of the Provincial Government, the informal clarification of any open questions and an on-the-spot inspection complete the review process.

The well-founded professional **assessment, delimitation and representation of the** (forest) areas relevant for the **nationwide uniform evaluation of forest functions** by the body responsible in the respective Federal Province (forest manager, in German “Forstwirt”) represents the essential basis of the Forest Development Plan. A careful revision of the existing Forest Development Plans is to comprehensibly reflect the changes required for forward planning in the planning area.

In so doing, the person carrying out the evaluation shall implement Article 6 Forest Act in planning practice and, in particular, delineate forest areas with identical evaluation of functions in functional areas. The **determination of the key functions** results from the ranking and weighting of the forest functions as set out in Article 5 paragraphs 5 through 8 of the Ordinance on the Forest Development Plan. They are expressed by the code of the functional area and have to be justified according to Article 4 para. 7 lit. b FDP Ordinance (description and

justification of the key function of the individual functional areas and, if necessary, references to the other functions).

The required uniform procedure in the outdoor surveys are based on the instructions for the **evaluation of the forest functions** (see Chapter 4).

The Forest Development Plan is subdivided into a **textual part** and a **map section** (map of functional areas 1:50.000) (Article 9 para. (4) Forest Act).

The text part follows the structure specified in Chapter 5.2 and also includes **obligatory** and **optional** tables (see Chapter 5.8), **obligatory** cartographic representations (see Chapter 5.3) and **optional** cartographic representations (see Chapter 5.4).

The map section is described by means of the **4-pillar model** in Chapter 7.2. This model defines the planning topics of the FDP map and the special maps with four pillars and arranges them according to obligatory and optional planning topics and maps.

The Forest Development Plan has to be prepared in **analogue (FDP text part and printed map)** and in **digital form** (PDF and shapefiles).

**Note:** The form of presentation for all maps, tables, graphic representations, forms etc. requested in the present Guideline is subject to any changes that may be necessary for technical, methodological or legal reasons.

# 4 Evaluation and recording of the forest functions

For each functional area, the forest functions have to be evaluated. One of them is to be established as the key function. The key function shall be the one that lies in the overriding public interest (Article 5 (2) FDP Ordinance).

## 4.1 Value code

The significance (value) of the protective, beneficial and recreational functions of every forest function area has to be indicated by means of a three-digit code (Article 5 para. 4 FDP Ordinance).

Table 1 Code of the function evaluation

Code		
The ones digit	Recreational function	Value numbers 0 - 3
The tens digit	Beneficial function	Value numbers 1 – 3
The hundreds digit	Protective function	Value numbers 1 – 3

### 4.1.1 Value number

The value of the respective forest function has to be indicated by means of a value number which expresses the degree of **public interest** in the respective forest function. For the **protective function (S)**, the **beneficial function (W)** and the **recreational function (E)**, the values are defined by means of value numbers.

Table 2 Definition of the value of functions

Value number	Value	Levels of public interest
0	none	no public interest
1	low	low public interest
2	medium	medium public interest
3	high	high public interest

For the description of functional areas, value numbers **2** and **3** have to be justified by indication of the relevant provision of the Forest Act (Article and, if necessary, paragraph, point, litera) and a description in conformity with the Guideline.

For the evaluation, it has to be checked whether an area meets the criteria for value number **3**. If this is the case, the area is assigned value number **3**.

If the criteria are not met, it has to be checked whether the criteria for value number **2** are met.

If so, value number **2** has to be assigned; if not, the functional area obtains value number **1** for the protective and the beneficial function, as every forest provides at least some protective and beneficial effect.

As regards the recreational function, it has to be checked whether the forest is basically accessible for recreational purposes. If this is the case, the functional area is assigned value number **1**. Forest areas which are permanently closed receive value number **0**.

If the criteria for value number 3 are not met and no criteria for value number 2 apply, value number 1 has to be assigned, value number 0 in the event of a permanent ban on access.

## 4.2 Key function

### 4.2.1 The productive function as key function

According to Article 5 para. 5 FDP Ordinance the productive function, which focuses on the **economically sustainable** production of the raw material of wood, is the **only one** of the four forest functions **without** multi-level evaluation in forest development planning.

Article 5 para. 5 FDP Ordinance Being the prerequisite for the fulfilment and ensuring of the protective, the beneficial and the recreational functions, the productive function is not subject to multi-level evaluation and has to be established as key function if neither the protective nor the beneficial nor the recreational function is of high value (value number 3).

**According to this provision the productive function is, as a rule, rated higher than the other forest functions.** Therefore, the protective function, the beneficial function and the recreational function are key functions **only if they are of high value** (see Chapter 4.3).

The summarised planning results for all Austria reflect the high importance of the productive function as well: On the greater part of Austria's forest areas, presently on about 62 %, the productive function is the key function.

In view of this intention, but without underrating the technical importance of the lower ranking functions (protective function, beneficial function and recreational function), the important role of the productive function is to be clearly described in each partial plan of the Forest Development Plan and underpinned by the respective forest and wood management data of the planning district (see Chapter 5.9).

#### **4.2.2 The protective function, the beneficial function and the recreational function as key functions**

The protective function, the beneficial function or the recreational function is to be established as the key function if this function is of **high value (value number 3)**. If more than one of the three functions are of high value, the key function has to be determined in the following **order: Protective function ahead of beneficial function ahead of recreational function.**

In the map of forest functions ("Waldfunktionskarte"), the key function of each forest area has to be visualised by colouring of the entire area, using the colours specified in Article 5 para. 8 FDP Ordinance.

A tried and tested method is an evaluation from the counterslope or the review of the existing FDP by means of an orthophoto or aerial photograph. In any case, the **delimitation of functional areas** has to take into account national borders, provincial borders and district borders. Special local knowledge, aerial maps, digitally available surveys, project results can partly replace terrestrial surveys.

To be able to **survey the degree to which a function is fulfilled** in a functional area, and to identify any impairments, in most cases an “exploration of the forest” is necessary. Any **impairments of functions** have to be described and their causes have to be determined. It is, therefore, necessary to identify suitable **measures** to preserve the desired forest effects for the long term and to determine the respective level of **urgency**. As the impairments, or the restoration and tending measures, often concern only parts of a functional area, the size of the parts of the respective functional area (= 100 %) that are actually concerned has to be estimated in steps of 10 %. In this way, the legal requirement of a forward-looking planning to ensure, or improve for the long term, the effects of forests is to be met.

Each functional area and the circular functional areas of a district are assigned consecutive ordinal numbers 1-n. These **ordinal numbers** of the functional and circular functional areas link the geometry data with the associated attributes in the database or the forms.

**Objects of the Forest Development Plan** include forest function areas, circular functional areas, shelterbelts, the upper timberline zone, and pointer areas.

**The limit values and figures indicated in the present Guideline, which are partly decisive for the evaluation, serve the technical orientation and objectification of the evaluation of functions. Any deviations have to be justified by giving convincing technical reasons.**

### **4.3 Evaluation of the protective function**

Forests can have a **site-protecting function** and/or an **object-protecting function**. Site-protecting function and object-protecting function have to be evaluated separately. The qualitative assignment of the two protective functions, site protection or object protection, is to be **made in the form** of the functional areas, **but is not to be represented on the FDP map**.

It is strongly recommended to coordinate the delimitation of areas having a protective function of value 2 or 3, in particular of those having an object-protecting function, with the Forest Engineering Service in Torrent and Avalanche Control (“Forsttechnischer Dienst für Wildbach- und Lawinenverbauung”).

In the case of **value number 1** it is assumed that each and every forest area makes at least a small contribution in the public interest to the fulfilment of the protective function.



### 4.3.1 Forests with site-protecting function

Site-protecting forests within the meaning of the Forest Act (Article 21 (1) Forest Act) (“Standortschutzwälder”) are forests which are located on **sites endangered by the eroding forces of wind, water and gravity**, and which require special treatment to protect the soil and the plant cover and to ensure reforestation.

The site-protecting function is justified by means of the relevant number and the associated text of Article 21 (1) of the Forest Act.

### 4.3.2 Forests with object-protecting function

Article 21 (2) Forest Act Object-protecting forests (“Objektschutzwälder”) within the meaning of this Federal Act are forests which protect humans, human settlements or facilities, or cultivated soil, in particular against natural hazards or injuring environmental impacts and which require special treatment to gain and ensure their protective effect.

**Note:** The **protection against noise** and **light** are protective effects and, therefore, are to be taken into account only in the evaluation of the object-protecting function.

Pursuant to the provisions of forestry law the control of harmful emissions of air pollutants can be seen both under the aspect of the protective effect and under the aspect of the beneficial effect. To avoid double evaluations, the present Guideline provides that the **air-regenerating filter effect** of forests (including the aspect of **averting hazards caused by emissions of air pollutants**) and the **purification of water** as well as the **balance of the water regime** are to be evaluated exclusively within the framework of the evaluation of the beneficial function.

As a prerequisite for the designation of a forest with object-protecting function, the following parameters must apply:

- **Objects** to be protected and
- **hazard processes** with a **potential for damage** of relevance to object protection.

**As opposed to the object-protecting forest, a forest with object-protecting function does not (necessarily) presuppose that special treatment is required for achieving (improving) or safeguarding this protective effect.** The current (more or less permanently changing) condition of the forest on the area does not have any influence on the evaluation and the designation of the object-protecting function in the plan.

In the rating of the value of the function, the **management** of forests is not taken into account; only their **spatial function** is considered.

For the rating of the value of the function (3 = high, 2 = medium, 1 = low value) the systematic consideration of the **“value” of the objects to be protected is of particular importance.** For the evaluation of the object-protecting function of a forest, the public interest in the objects to whose protection the area to be designated is to contribute shall be considered. Consideration is given according to so-called “object classes” (“Objektklassen”) which in particular reflect the public interest in their existence and availability for use.

Table 3 Object class III - high value. Special public interest in the protection of the object by the forest

<b>Numeric code</b>	<b>Description</b>
<b>11100-01</b>	Residential buildings (buildings suited for residential purposes), residential and company buildings
<b>11100-02</b>	Company buildings for administration, trade, industry, commerce, gastronomy, health, security, communication, supply and disposal (energy, water, waste), traffic
<b>11100-03</b>	Farm buildings (including buildings on alpine pastures*; not including "hay barns" in fields)
<b>11100-04</b>	Buildings used for sports, cultural and religious activities
<b>11100-05</b>	Take-off stations of cable cars and lift facilities with connection to the public road network
<b>11100-06</b>	Buildings immediately bordering object types 1 through 5 and areas surrounding these types that are functionally connected to them (side areas like parking space around houses, operational areas/facilities**, parking lots, private residential gardens, garages, storage facilities)
<b>11100-07</b>	Dedicated building land and special open/green land designations equivalent thereto

<b>Numeric code</b>	<b>Description</b>
<b>11300-18</b>	Utility and communications facilities (e.g. power stations, sewage treatment plants, transformer stations, transmission towers, water reservoirs) excluding pipelines
<b>11300-22</b>	Dedicated land for operational facilities (such as 11300-18)
<b>11300-19</b>	Above-ground pipelines
<b>12100-26</b>	Roads of the higher-ranking transit network (GIP Functional Road Class 0 - 4)
<b>12100-28</b>	Parking lots
<b>12200-30</b>	Railway lines (main lines and branch lines) with operational side areas**
<b>12200-31</b>	Funicular railway routes with operational secondary areas**
<b>12300-33</b>	Airports
<b>12300-34</b>	Areas destined for air traffic
<b>50000-37</b>	Utilised agricultural areas (for example arable land, meadows, vegetables, fruit, wine) on grounds prone to erosion by wind, in particular in the areas along shelterbelts

Table 4 Object class II - medium value. Increased public interest in the protection of the object by the forest

<b>Numeric code</b>	<b>Description</b>
<b>12100-27</b>	Other public roads ("community roads") and private roads providing a connection for permanently used residences and working places
<b>11210-10</b>	Cemeteries, parks
<b>11210-11</b>	Outdoor leisure-time facilities such as playgrounds, riding grounds and tennis courts, swimming pools (with the exception of arenas --> buildings)
<b>11210-12</b>	Camping sites
<b>11220-14</b>	Pistes, ski routes, cross-country skiing tracks, toboggan runs
<b>11220-15</b>	Cable car and lift routes below ski lifts (exception: Funicular railways, material and blasting ropeways)
<b>11300-20</b>	Masts of the high-voltage transmission line network

<b>Numeric code</b>	<b>Description</b>
<b>12200-32</b>	Material ropeway routes with operational ancillary areas**
<b>11210-13</b>	Areas dedicated to recreation and leisure facilities (such as 11210-10, -11, -12)
<b>11220-17</b>	Areas dedicated to alpine sports infrastructure (such as 11220-14, 11220-15)

Table 5 Object class I - low value. Public interest in the protection of the object by the forest

<b>Numeric code</b>	<b>Description</b>
<b>11100-09</b>	Other buildings (for example hay barns in fields)
<b>11220-16</b>	Routes of material ropeways
<b>11300-21</b>	Other masts of the electricity transmission network
<b>11400-23</b>	Above-ground mining areas (for example quarries, gravel pits) with screes
<b>11400-24</b>	Open-air disposal sites for final disposal and/or processing of waste materials
<b>12100-29</b>	Forest roads, freight paths (including access roads to alpine pastures) ***
<b>50000-35</b>	Tree nurseries, horticultural land, but no market gardens (--> building area)
<b>50000-36</b>	Areas dedicated to uses according to 50000-35
<b>50000-38</b>	Other utilised agricultural areas (for example arable land, meadows, vegetables, fruit, wine)

\* Buildings on alpine pastures without dedication for residential purposes and rarely used buildings on alpine pastures can be assigned to object class II.

\*\* Facilities serving the protection against natural hazards, such as avalanche control structures, are not considered operational areas or operational ancillary areas (to be protected by forests).

\*\*\* Forest roads and freight paths are in object class II, if they are dedicated to a use as sports infrastructure (for example as toboggan run or cycling trail) or if they have a

special connective function (as emergency walkway in the permanent settlement area, for technical infrastructural facilities of object class III).

### **Note for the evaluation of forest function areas with shelterbelts**

- Within the range of shelterbelts agricultural areas, cultivated soil or arable land have to be assigned to object class III.

### **If there is a comprehensible justification for doing so, the value of an object can be increased or reduced on an individual basis.**

- Example 1 Increase: A forest road which is at the same time a toboggan run and leads to an alpine pasture which is farmed also during winter time = object class **2** instead of object class **1**
- Example 2 Reduction: An alpine pasture for young cattle which is only rarely used = object class **2** instead of object class **3**)

If there are different object classes within a zone to be protected, the parts of the forest area that have a protective effect are always to be assigned to the "highest" object class.

From a technical point of view, areas having a protective function (S3, S2) are often a "mix" of forest with site-protecting function and forests with object-protecting function, often also for objects of class III and/or class II. Likewise, different types of hazards (e.g. falling stones, danger of avalanche) within a functional area can be reduced or averted by means of the desired protective function.

It should be emphasised that **no object-protecting function can be inferred** from the **mere existence of an object**, no matter of which class, but that also a potential, assignable **natural hazard** or a **harmful environmental impact must** exist. The natural hazard (the natural hazard process) need not yet have taken place or have been observed (for example due to the sufficient protective effect of the forest), but its occurrence must be possible due to the climatic, hydrological, geomorphological and geological situation.

The level of threat posed by the natural hazard and the probability of its occurrence (hazard potential) are to be the basis of the rating of the object-protecting function, without consideration of the status or the protective effect of the forest.

**Hazard potentials** in the terrain are addressed taking account:

- Gradient - the steepness of the area;
- Silent witnesses of active and past processes;
- Size and condition of the catchment area;
- Quantity of loose masses;
- Geomorphology;
- Climatic and meteorological as well as hydrological aspects, such as precipitation, amount of snow;
- The properties of the soil, the unconsolidated rock and the solid rock (geology): for example adjacent rock, slide-prone ground;
- Available reference maps indicating hazard potentials, dangers (risks) and environmental stress;
- Historical records of events (chronicles of events).

The value number 3 or 2 results from the object class and the hazard potential (how strong is the impact of the event, how likely is the occurrence of an event). The hazard potential describes the probability and possible intensity of a hazard process without taking into account the protective effect of the forest or technical protective structures (with the exception of changes concerning the terrain).

### Value of the object-protecting function

**S 3 (high)** **S 2 (medium)** **S 1 (low)**:

Table 6 Value of the object-protecting function

Object-protecting function	Hazard potential 3 (high)	Hazard potential 2 (medium)	Hazard potential 1 (low)
Object class III	S 3	S 3	S 2 °
Object class II	S 2 *	S 2	S 1
Object class I	S 1 *	S 1	S 1

\* If there is a comprehensible justification, the value (S 1, S 2) can be increased.

° If there is a comprehensible justification, the value (S 1, S 2) can be reduced or increased.

If a functional areas has an object-protecting function, the type of risk (= hazardous process) has to be stated in the description.

- Stone fall, rock slide
- Landslide
- Avalanche, snowslide
- Mudflow
- Flood
- Wind

**For the assessment, in particular that of the hazard potential, the available state-of-the-art modellings or maps (Hazard Zone Plans of the Service in Torrent and Avalanche Control, existing hazard indication maps in the Federal Provinces) are to be used. The model results are to be regarded as proposals; they have to be compared with the actual situation on the spot and adjusted, if necessary.**

Hazard indication maps and hazard maps are prepared for different purposes. It is, therefore, important to note whether the respective concept according to which the (potential) hazard plots are designated takes into account the criteria and parameters required for the forest area, respectively the assessment of the function, such as the type of hazard, ground inclination, object to be protected (damage potential) - with consideration of the object classification. It should also be noted that the classes of different hazard maps do not have to be directly comparable in terms of their message. The methods used to prepare such a map have to be determined. The - mostly long-standing - experience and the exact knowledge of local conditions of the technically competent persons can only partly be replaced and supplemented by the results of modelling.

### **4.3.3 Protective forests declared by official notice (“Bannwald”)**

According to Article 27 of the Forest Act certain forests have to be declared protective forests by official notice. Forests declared protective forests by official notice due to their object-protecting function always have to be awarded **value number 3**. In the textual part, all “Bannwald” areas have to be listed in a table with indication of the municipality, the purpose of declaring the forest a protective forest as well as the number and the date of the official notice.

Protective forests declared by official notice must obligatorily be presented as pointer areas.

If, in the case of a “Bannwald” area of more than 10 hectares, the surrounding functional areas do not have value S3, the “Bannwald” area has to be delimited and presented as a separate functional area.

### **4.3.4 Shelterbelts**

Article 2 (3) Forest Act Shelterbelts are lines or rows of trees or bushes which primarily serve to protect against damage by wind, especially for agricultural plots, and to hold snow.

The provisions of the Forest Act shall be applied to all shelterbelts, including those not made up of trees or shrubs listed in the Annex to the Forest Act, irrespective of the nature of use of the basal areas and the site structure of the plant cover.

In Article 2 lit. a of the FDP Ordinance, shelterbelts are laid down as objects of representation and planning of the Forest Development Plan.



If the parameters effective for the designation of forests with object-protecting function apply to a sufficient degree, shelterbelts in insufficiently stocked areas where objects of a high quality exist (object class III) are classified as forests with **high object-protecting function (S 3)**.

The provisions of Articles 22 through 24 of the Forest Act apply.

Shelterbelts are stand areas which are recorded by cadastral municipality and can be merged to form larger functional areas (see Chapter 6.4).

In addition to their important site-protecting function and object-protecting function (in particular protection of the soil of the protected areas against soil drift and rainwash), shelterbelts often also constitute a distinctive landscape feature in insufficiently stocked parts of the landscape and, as part of interlinked biotopes, provide special habitats for animals and plants. Due formation has a favourable impact on temperature equalisation and air humidification, above all in sparsely wooded areas.

If a municipality does not have any shelterbelts, a **zero report** has to be made in the respective chapter of the textual part.

#### **4.3.5 Forests on wind-blown sand soil or drifting soil according to Article 21 para. (1) sub-para. 1 of the Forest Act**

Criteria for **value number 3**

Forests located on sites

- endangered by the eroding forces of wind (for example drifting of litter and fine humus, fine earth)
- with dryness due to the soil structure (e.g. sand)

#### **4.3.6 Forests on sites with a tendency towards karstification or on sites that are particularly prone to erosion according to Article 21 (1) pt. 2 Forest Act**

- **Karstification** refers to chemical weathering processes, mainly on limestone and dolomite sites, caused by carbonic acid. From a technical point of view, karstification as a dissolution process takes place already under the vegetation cover. When this process becomes visible on the surface, the next step, namely loss of soil or loss of humus, has already taken place.

- **Areas prone to erosion** are areas with visible current litter or soil erosion caused by surface waters (small runlets) as well as areas which are directly endangered by the eroding forces of running waters and sites with area-wide soil erosion by snow pit or wind.

#### Criteria for **value number 3**

- Striking loss of humus within the stand, adjacent rock at many points of the stand (larger than 25 % of the functional area), predominantly shallow soils (1 - 30 cm)
- The effective soil depth is the thickness of the mineral soil horizon without bedrock.
- Visible **cirques** or **sinkholes**
- If **visible signs** of karstification exist or karstification is likely to occur due to the rock and the humus layer (for example due to wrong management)
- Sites with visible, current **erosion**

#### Criteria for **value number 2**

- On carbonate sites with adjacent rock at few points of the stand (less than 25 % of the functional area) and otherwise closed vegetation cover, predominantly shallow soils but without the tendency of karstification, and in the case of erosion risks which, however, do not show current signs of erosion.

### **4.3.7 Forests on rocky, shallow-grounded or steep locations if their reforestation is possible only under difficult conditions; according to Article 21 (1) sub-para. 3 of the Forest Act**

- **Rocky sites** are characterised by **adjacent rock on more than 25 % of the area**.
- **Shallow grounds** have an effective **soil depth of less than 30 cm**. (The effective depth of a soil is a thickness of all loose-material horizons, reduced by the skeletal fraction.)
- **Steep locations** have a **gradient of more than 60 %** (approx. 30°).

#### Criteria for **value number 3**

- Rocky, shallow-grounded or steep locations if their reforestation is possible only under difficult conditions
- Locations with gradients of more than 80 % (approx. 40°), as, with this degree of steepness, reforestation is expected to be difficult always

#### Criteria for **value number 2**

- Rocky, shallow-grounded or steep locations up to a gradient of 80 % (approx. 40°), if **no difficulties in respect of reforestation** are likely to occur.

Reforestation is likely to be difficult in the case of:

- Dry periods in the growing season (gravel ridges, so-called "Heißländer"; raw soils)
- Frost accumulation sites
- Water logging
- Sites in the upper timberline zone
- Sites requiring measures against snow surge
- (Clear-cutting from above, transverse cutting, protection against gliding snow, berms, snow fences)
- Sites with current rockfall
- Screes and boulder fields, rock fall areas
- Sites with superficial degradation due to anthropogenic land-use (litter use)
- Sites with poor water supply and strong solar radiation

#### **4.3.8 Forests on slopes where dangerous slides might occur according to Article 21 para. (1) sub-para. 4 of the Forest Act**

- These are sites on geological material at risk of sliding (e.g. phyllite, schist, flysch, moraine material, talus, etc.) in connection with slope water and spring horizons. Slopes on which dangerous slope slides might occur can usually be identified through troubled small relief, sheet fractures, displacements, scars, steep slope damaged by erosion ("Blaiken"), sabre-shaped growth of trees or other "silent witnesses".

##### Criteria for **value number 3**

- If there are visible signs of **slope slides**
- Banks of brooks at risk of sliding (unstable foot of the slope, threat of log jamming)

##### Criteria for **value number 2**

- If the site tends to slide, but there are no visible signs of soil movement

### **4.3.9 The forest cover in the upper timberline zone as well as the forest belt immediately bordering the upper timberline zone according to Article 21 (1) pt. 5 and pt. 6 Forest Act**

Criteria for **value number 3**

- Forests, groups of trees/“Rotten” (groups of trees of different age) and individual trees stocking there as well as dwarf pine and green alder areas have a high protective function (§ 3).

#### **Note**

- However, if, due to the “natural conditions”, only individual trees or shrubs exist, there **can** be a medium protective function.
- Due to their small size these areas are not shown on the FDP map.
- The provisions of Article 25 of the Forest Act apply.

**The forest belt immediately bordering the upper timberline zone according to Forest Act Article 21 para. (1) sub-para. 6:**

The upper timberline zone and the forest belt bordering it on its lower end shall *ex lege* be assigned value number 3 in the FDP.

**Areas bordering areas of which < 80 % are part of the upper timberline zone and where the preconditions set out in Forest Act Article (21) para. (1) sub-para. 6 are therefore already met can also be assigned a lower value number.**

A **downward** delimitation of a functional area is to be carried out **only if the significance of functions has changed.**

It is possible to indicate an upper timberline share of < 80 % for functional areas. Such areas include the transitional areas outlined in Forest Act Article 21 para. (1) sub-para. 6 and both the areas themselves and the areas bordering them can be assigned a value number lower than 3 due to the large-scale consideration.

#### **4.3.10 Information concerning forests protecting against air pollution including noise, according to Article 7 lit. a point 2 of the Forest Act**

As a principle (according to the common interpretation of forestry law) “noise control” is deemed to be an **object-protecting** function. It is pointed out in this context that, as things stand, there are no sufficient foundations, criteria or parameters for a **systematic** and comprehensible assessment/identification of these types of hazards or impairments in connection with the forest areas in question or the people, objects etc. to be protected.

**In the current circumstances**, a comprehensible, area-wide **evaluation of functions**, delimitation of areas and description of measures concerning “forests protecting against air pollution including **noise**” (Article 7 lit. a point 2 of the Forest Act) is **not possible**.

Only if comprehensive surveys or a comprehensible and, from a technical point of view, sufficient data situation is available, corresponding specifications can be made for the purposes of this Guideline.

#### **Note**

The protection against emissions caused by air pollutants concerns the evaluation of the beneficial function (air purification), (see Chapter 4.4).

### **4.4 Evaluation of the beneficial function**

In view of the advancing climate change and the growing importance of drinking water resources, the evaluation of the beneficial function has gained importance in forest development planning (compare Article 6 (3) of the Forest Act).

This applies, in particular, to:

- areas with a concentration of residential and employment locations
- transport areas with high traffic volumes
- areas with low forest cover
- areas serving the purification and renewal of drinking water or air

Areas where the beneficial effects of the forest are particularly important should, therefore, have an adequate **spatial structure and forest cover**.

As in the case of the other forest functions, a temporary release of the plant cover from its beneficial function (due to use, disasters etc.) does not influence the assessment of the beneficial function.

#### **4.4.1 Protective forests declared by official notice (“Bannwald”) having a beneficial function Article 27 para. (2) lit. b through d of the Forest Act**

According to Article 27 of the Forest Act (also) forests whose beneficial effect takes precedence over the productive effect shall be declared protective forests by official notice. Protective forests of this type shall always be assigned **value number 3**. In the text part (analogous and digital), all “Bannwald” areas have to be listed in a table, stating the municipality, the purpose of the declaration as “Bannwald” and the reference number of the official notice.

Protective forests declared by official notice must obligatorily be represented as pointer areas.

If the size of a “Bannwald” exceeds 10 hectares and the surrounding functional areas do not have valency W3, the “Bannwald” area has to be delimited and presented as a separate functional area.

## **4.4.2 Forests having a balancing effect on the regional climate**

### Criteria for **value number 3**

- Improvement in the climate through large-scale air exchange or, in view of climate change, the high importance of the forest for air cooling in areas in the vicinity of conurbations (examples: Vienna Forests (“Wienerwald”) for the city of Vienna and the Vienna Basin or the Kürnberger Wald for Linz).

### Criteria for **value number 2**

- Those forest areas that border the core area of the forest important for air cooling around conurbations (W3) and still having an increased importance for air cooling (transitional area).
- Those forest areas that are particularly seriously affected by climate change and whose existence is endangered by the loss of tree species or area-wide collapse and where, therefore, a modification and preservation of these forests is necessary to ensure the positive influence on the climate.

## **4.4.3 Forests having a balancing effect on the local climate**

### Criteria for **value number 3**

- Forests located in the vicinity of settlements, sanatoriums, medical institutions or leisure facilities which reduce damage caused by cold air, extreme temperatures or extreme humidity or adverse effects of the wind.

### Criteria for **value number 2**

- Forests located in the vicinity of other areas (in particular utilised agricultural areas, big rivers and stagnant waters) which reduce damage caused by cold air, extreme temperatures or extreme humidity or adverse effects of the wind.

## **4.4.4 Forests having a positive effect on the climate in very sparsely or sparsely wooded areas**

### Criteria for **value number 3**

- **Climate-balancing effect in very sparsely wooded areas:** Forests which, due to their regulating effect on temperature and humidity, play a particularly important role in very sparsely wooded areas. (In this context, the relevant percentage of forest cover of a cadastral community or a functional area will usually be smaller than 20; however, due to the local or small regional forest conditions, a percentage of forest cover <10 can be used.) In this assessment, the dynamic development of forest areas over the past 10 years is to be taken into account.

#### Criteria for **value number 2**

- **Climate-balancing effect in sparsely wooded areas:** Forests which, due to their regulating effect on temperature and humidity, play a particularly important role in sparsely wooded areas (percentage of forest cover of a cadastral community or a functional area of 20 up to smaller than 40). In this assessment, the dynamic development of forest areas over the past 10 years is to be taken into account.
- Forest areas adjacent to very sparsely wooded areas (W3) which are of particular significance due to their regulating effect on temperature and humidity.

### 4.4.5 Beneficial effect through the purification and renewal of water and/or through the improvement of the water balance

#### Criteria for **value number 3**

- Forest in **water catchment areas of a large-scale supply system** which is managed in a specific way (for example spring-protecting forests of the municipality of Vienna, forest cover in riparian areas of water bodies with a catchment area of more than or equal to 10 km<sup>2</sup> according to the Austrian reporting water body network of the Federal Government (“Berichtsgewässernetz”) where groundwater abstractions are of high public interest and/or are directly or indirectly reimbursed). This applies *mutatis mutandis* to protected well areas.
- **Water protection areas designated by official notice or by ordinance** or core areas of water conservation areas, in particular for drinking water supply. In these cases there will always be a high public interest. Usually the forest manager is subject to certain obligations or management restrictions (which would have to be the basis of the compensation for the resulting management handicaps)
- Small protected spring or well areas (area around the springs or wells **that require particular attention or specific measures**) for local use, in case of sufficient yield and good



quality. Several small protected spring or well areas can be merged into one functional area or circular functional area.

#### Criteria for **value number 2**

- Catchment areas of springs and wells that are **not recorded in the Water Register (“Wasserbuch”)** and supply only individual estates.
- Catchment areas of springs and wells that border protected spring or well areas and demonstrably have a favourable impact on them as well as fringe areas of water conservation areas. (Specific requirements concerning the management of these areas are set out in the applicable provisions of water law.)
- Forests that include several unused springs whose use at a later point in time could at least be of heightened public interest.
- Several spring / well areas (at a distance of max. 150 m) according to the “Wasserbuch” can be merged into one circular functional area. If an area concerned is larger than 10 hectares, a separate functional area has to be designated.

#### Note

- Please also see the relevant provisions of the Water Rights Act. ([www.bmlrt.gv.at/wasser/wasser-oesterreich/wasserrecht\\_national/planung/Schongebiete.html](http://www.bmlrt.gv.at/wasser/wasser-oesterreich/wasserrecht_national/planung/Schongebiete.html)).

### 4.4.6 Beneficial effect through air purification and air regeneration

#### Criteria for **value number 3**

- Interception of dust and other atmospheric pollution by crowns in densely populated areas or along main transport routes (highways, express roads or provincial roads B) which can be demonstrated by means of needle analyses or derived from legal provisions on air pollution control.

#### Criteria for **value number 2**

- Interception of dust and other air pollution by crowns in densely populated areas affected by air pollution according to Article 1 of the Ordinance of the Federal Minister of Sustainability and Tourism on polluted areas (air) 2019, original version: Federal Law Gazette II No 101/2019, or similar legal provisions.

- Large-scale interception of dust and other air pollution from far-distance emissions by crowns, for example on under-cut slopes, which can be demonstrated by needle analyses or air measurements.
- Interception of dust and other air pollution from clearly established sources of pollution by crowns in sparsely populated areas.
- Interception of dust and other air pollution by crowns along roads of a higher level than community roads.

## Notes

A densely populated area is a conurbation with at least 3,000 inhabitants.

Ranking of roads in the digital landscape model of the Austrian Federal Office of Metrology and Surveying ("Bundesamt für Eich- und Vermessungswesen"):

- Highway
- Express road
- Ramps
- Provincial road B
- Provincial road L
- Community road (other road)
- Parking lot driveways
- Side road

Note: Strips 650 to 900 metres wide on both sides of main transport routes are considered effective. At this distance, forests can reduce the concentration of 10 µm dust particles by half.

Source (R. Jonas et al.: Die Filterwirkung von Wäldern gegenüber staubbelasteter Luft. In: Forstwirtschaftliches Centralblatt. No 104/1985, p. 296

Through the interception effects of crowns with respect to dust and other air pollution, forests have a favourable impact on the purification and regeneration of air and water. This effect varies for the different elements and depends on the concentration of the elements and the choice of tree species. Some scientific documents have been published on this issue (see above). Apart from these basic scientific findings, also the measurements of the **Bio-Indicator Grid** ("Bioindikatornetz") of the Federal Forest Office ("Bundesamt für Wald") can be used for the

assessment. If the **limit values are exceeded several times**, it can be assumed that it is a forest having a high beneficial effect.

## 4.5 Evaluation of the recreational function

According to Article 36 of the Forest Act a forest can, upon application, be declared a recreational forest by official notice, if there is public interest in using the forest for purposes of recreation because there is a need for recreation space for the population of certain areas, especially conurbations, which is to be directed into regulated channels because of its extent or the creation, maintenance and formation of recreational areas appear desirable in tourist areas. After the official notice has acquired legal force, the Governor of the Province shall identify this forest area as recreational forest in the Forest Development Plan.

Decisive criteria for the evaluation of the recreational function of the forest are the proximity to conurbations and scenic landscape. The recreational function is usually reflected in the visitor frequency, the tourism infrastructure and the demand for regulatory measures to avoid conflicts of interest and excessive use.

The following aspects are to be taken into account in expert opinions on the recreational function of forests:

- Accessibility of the forest by public transport and via the road network
- Opening up of the forest through parking lots as well as forest paths, hiking trails, cycle tracks and bridle paths
- Equipment with further recreational facilities
- Natural prerequisites like climate, condition of the terrain, distribution of the forest, forest structure, in particular also (protected) animals and plants
- Use for everyday recreation, week-end or holiday recreation
- Restrictive factors like noise and local air pollution or urban sprawl
- Permanent bans according to Article 34 (3) of the Forest Act
- Permanent bans according to other material laws
- Protected areas and areas worthy of protection for species and biotope protection

Criteria for **value number 3**

- Forests with high, well-balanced numbers of visitors all over the year or periodically, respectively seasonally (strong excursion traffic on weekends, day-to-day leisure activities of the people living in the areas surrounding the forest), with significantly above-average tourism facilities.

Tourism facilities include, in particular:

- Well-marked paths with information facilities
- Designated cycle paths, mountain-biking trails or bridle paths, routes for skiing tours
- Ski slopes, cross-country ski trails, ascending aids
- Country inns, mountain huts, shelter refuges
- Bench seats, viewpoints, playgrounds, barbecue areas, bathing areas, parking lots, fitness trails, forest nature trails
- Dense network of trails
- Forests located in the surroundings of conurbations ( $\geq 3000$  persons) - **provided that** the areas concerned clearly have high numbers of visitors and/or facilities all around the year or seasonally.
- Forests at a distance of up to 3 km from the centre of spas or tourist locations - **provided that** the areas concerned clearly have high numbers of visitors all around the year or seasonally and/or facilities are available.

An indicator is an impairment of forest management and of ancillary forest purposes by those seeking recreation.

Criteria for **value number 2**

- Forests with moderate or only infrequent high visitor numbers, or forests whose high visitor numbers are limited to a narrow corridor in the functional area.

Criteria for **value number 1**

- Forests with below-average visitor numbers.
- In general, all forests to which none of the criteria for other valencies apply, as anyone may enter and spend time in forests for recreational purposes.

Criteria for **value number 0**

- Forests located in restricted areas with permanent ban on access, such as, for example, core areas of national parks, biosphere parks or wilderness areas, military training areas, shooting areas, specific industrial sites
- Forest areas devoted to special plantations developed for ancillary forest purposes such as growing Christmas trees (Article 34 para. (3) lit. a Forest Act)
- Forest areas which the owner of the forest retains for himself or his employees in close proximity to their dwellings (Article 34 para. (3) lit. c Forest Act)

#### 4.5.1 Declared recreational forest - Article 36 Forest Act

According to Article 36 of the Forest Act forests can be declared as recreational forests. These recreational forests always have to be rated with **value number 3**. In the textual part, the recreational forest areas have to be listed stating the municipality, the name of the place as well as the number and the date of the official notice in the form of a table.

Recreational forests must obligatorily be presented as pointer areas.

If the size of a recreational forest area exceeds 10 hectares and the surrounding functional areas do not have value E3, it has to be delimited and shown as a separate functional area.

## 4.6 Evaluation of functions of water areas and of built-up or dedicated settlement areas

Also all areas covered by water bodies and built-up or dedicated settlement areas have to be evaluated.

However, the **coloured representation** of the key functions is **limited to the forested part** of the relevant functional area that has been determined with the forest layer (see Chapter 7.8.2).

### Note concerning the demarcation of the functional area

- In the case of a demarcation **on water bodies**, the **boundary of the functional area** shall be set along political boundaries such as national boundaries, provincial boundaries, district boundaries and municipal boundaries as well cadastral community boundaries.

## 4.7 Areas whose functions are not evaluated

- Alpine summit regions above the natural border of forest plant cover larger than 10 hectares are not designated as functional areas and are not attributed (former “0” areas).

These **areas** do **not** obtain an upper-timberline symbol or a database entry.

## 4.8 Impairment of the key function, causes, proposed measures and levels of urgency

If, due to one or several reasons, the forest stand of the functional area has been brought to a condition which is not suited to sustainably provide the desired forest effect(s) to a satisfactory extent on a part of or on the entire functional area, the **key function** is deemed to be **impaired**.

The impaired forest area shall be estimated proportionally in 10 % increments.

The area size is calculated from the forest function area.

### 4.8.1 Impairments of the key function

The following aspects of impairment are of relevance in this context:

- **Soil** (soil movement, erosion, compaction)
- **Needles/Leaves** (discolouration of needles/leaves, necroses, loss of needles/leaves)
- **Nutrient balance** (degradation, contamination, eutrophication)
- **Spatial/infrastructural** aspects (lack of forest road construction, pressure of forest clearing, fragmentation)
- **Area-wide damage events** (wood damage, damaged caused by bark-peeling, other bark damage and damage of the cambium, browsing damage, damage caused by fraying of game, wind breakage/wind pressure/windthrow, damage caused by snow, damage caused by forest pests)
- **Structure** (tree species composition, single layer, high h/d ratio, surplus or deficit of stems, ageing, lack of regeneration)
- **Texture** (loss of texture, layers)
- **Water regime** (desiccation, water logging)
- **Roots** (root damage)

In the course of the evaluation the causes of the impairment of the key function has to be determined and described and suitable remedial actions, including their urgency, have to be planned.

#### 4.8.2 Causes of the impairment of the key function

The following areas are of relevance in this context:

- **Abiotic factors** (mass movements, mass input, lack of precipitation (drought caused by climate change), wind, snow)
- **Biotic factors** (insects, mistletoe, fungi)
- **Forestry** (deficits in opening up, tending, regeneration)
- **Society** (far-distance **or** local pollutant emissions, zoning, groundwater, forest fire)
- **Agriculture** (forest grazing, alpine farming Article 7 lit. c pt. 2, litter use)
- **Raw materials management** (raw materials extraction)
- **Tourism** (local overexploitation by tourism)
- **Game management** (hunters, forest owners)

Actual planning starts with the determination of remedial actions and their **urgency**. After the “STATUS QUO” analysis, the required measures are to be determined in order to achieve, or safeguard, the desired forest effects in the public interest. This expert activity represents the planning part of the forest assessment.

#### 4.8.3 Remedial actions proposed

For the causes selected under 4.8.2, the following remedial actions are of relevance:

- Silvicultural measures
- Regulatory measures
- Hunting management actions
- Forest tending
- Combat
- Phytosanitary measures
- Protective measures
- Amelioration measures
- Technical measures
- Utilisation and recultivation control

- Separation of uses
- Extensification of uses
- Area management measures
- Construction of forest roads
- Construction of logging trails
- Restoration
- Infrastructural measures
- Legal measures
- Information and control
- Publicrelations measures

#### 4.8.4 Urgency of the remedial actions

The level of urgency of the remedial action is classified as **low**, **medium** or **high**. The required remedial action is weighted according to the levels of urgency. The levels of urgency are defined as follows:

Table 7 Levels of urgency of the planned actions

Levels of urgency		
very urgent <b>high</b>	<b>Level 3:</b>	within the current planning period
urgent <b>medium</b>	<b>Level 2:</b>	within the next planning period
not urgent <b>low</b>	<b>Level 1</b>	remedial action that is not fixed in time and relates, for example, to the rotation period



# 5 Textual part

## 5.1 General remarks

The **textual part** shall contain the following contents mentioned in Article 4 para. 7 Ordinance on the Forest Development Plan:

- the description of the planning foundations
- the description of and the reason for the key function of the individual functional areas, as well as, if required, indications of other functions
- Indications of functional impairments
- Indications of individual forestry planning and forest policy measures for the purposes of Article 1 para. 3 lit. a Forest Act (sustainable forest management)
- If required, planning according to Article 7 lit. c and Article 24 Forest Act (reforestation, separation of forest and pasture).

The content-related structure of the partial plan shall follow the table of contents (see Chapter 5.2 5.2) bindingly.

Here a differentiation shall be made between **mandatory contents** at federal level and **optionally possible contents** (they are marked with blue colour in the table of contents).

Also regarding the maps and tables to be represented in the textual part a differentiation shall be made between maps which have to be represented mandatorily (see Chapter 5.3) and maps which can be represented optionally (see Chapter 5.4) and tables (see Chapter 5.8).

The **extent of the text** and the **precision**, by which the respective content of the Chapter is described in the partial plan, can be dealt with **in a flexible way**.

From the point of view of forest law, every revision shall be preceded by the following formulation as an introduction:

“The partial plan of the Forest Development Plan (Subsequently called: FDP) for the political district .... was established according to the Second Section of the Forest Act 1975 (subsequently called FortsG) Federal Law Gazette No 440, as amended, Federal Law Gazette I No 56/2016 and the Ordinance on the Federal Development Plan,

Federal Law Gazette No 582/1977, as well as with the Guideline on content and form of the Forest Development Plan enacted with the Decree of the Federal Ministry of Agriculture, Regions and Tourism from\_ , No .The present FDP constitutes the 2nd revision of the Forest Development Plan for the district \_ which has been approved by the Federal Minister for Agriculture, Regions and Tourism on...”.

The **statistics** and data used in the FDP shall be as topical as possible and must show an **indication of source**. Figures shall be rounded to a maximum of 2 decimal points.

The **up-to-dateness** of data aimed at by the present guideline can also be achieved and/or approved by means of **references to the databases of competent institutions on the internet** [Indication of internet addresses (URL, date of download) for current climate, tourism or economic data, etc.].

An **opinion** of the **Provincial Spatial Planning (according to Article 9, para. 6 Forest Act)** shall be obtained, moreover, a consultation on the FDP assessment along the district or provincial border with the respective **neighbouring districts** shall take place. Both shall be indicated to the Federal Ministry at the time of the application for pre-check (for approval according to Article 9, para. 6 Forest Act). The opinion and/or the protocol shall be enclosed with the FDP.

## 5.2 Content and structure of the Forest Development Plan

The following structure, the designation and the numbering of the chapters and sub-chapters has been laid down bindingly on a standardised nationwide basis and has to be complied with when writing the partial-plan of the Forest Development Plan.

- Binding topics of the plan, which are not relevant for the planning area or are not documented, shall be described with an **empty signal**.
- Example: There exist no shelterbelts in the planning area: This means that with Chapter 3.7.3 shelterbelts the headline of the Chapter shall be followed by the sentence: “There exist no shelterbelts in the planning area”:
- Additional topics, which are dealt with optionally and can be assigned to the sub-chapters of the structural levels 3 or 4 are represented in italics in this Guideline (Chapter textual part - table of contents).
- A new designation and numbering of the Chapter is only possible with such additional topics.

Table 8 Example of structure

<b>Structural level 2</b>	3.4	Growth areas and forest communities
<b>Structural level 3</b>	3.4.1	Growth areas
	3.4.2	Natural forest communities
	3.4.3	Current forest communities
	3.4.4	<i>Other additional topics (optional)</i>
<b>Structural level 4</b>	3.4.4.1	<i>Other additional topics (optional)</i>

## Table of contents

### 1 Introduction

### 2 General foundations of the planning unit

#### 2.1 General and forestry-related administrative structure

#### 2.2 Social and economic structure

2.2.1 Landscape geographical structure and land use

2.2.2 Settlement and population development

2.2.3 Regional area planning programmes and concepts

2.2.4 Overall economic development (industry, trade, tourism)

2.2.5 *Transport and mobility (optional)*

### 3 The forest in the planning unit

#### 3.1 Climate

#### 3.2 Geology and soils

#### 3.3 Growth areas and forest communities

3.3.1 Growth areas

3.3.2 Potential natural forest communities

3.3.3 Current forest communities

3.3.4 Special forest sites

#### 3.4 Forest cover and ownership structure

3.4.1 Forest cover and forest area dynamism of communities and cadastral communities

3.4.2 Forest cover according to the Austrian Forest Inventory (ÖWI)

3.4.3 Clearings

3.4.4 Forest ownership structure

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#### 3.5 Data of the forestry and timber industries

3.5.1 Volume of timber harvested according to the timber harvest report (HEM)

3.5.2 Reserves, utilisations and increment

3.5.3 Distribution of tree species

3.5.4 Opening up of forests

3.5.5 *Survey of forestry history (optional)*

3.5.6 *Forestry staff (optional)*

3.5.7 *Subsidisation of forestry (optional)*

#### 3.6 Impairments and hazards of the forest - periodical surveys

3.6.1 Stress caused by airborne pollution

3.6.1.1 Procedures according to Articles 47 ff Forest Act sub-section IV. C.  
Forest-damaging atmospheric pollution

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3.6.2 Abiotic hazards

- 3.6.2.1 Storm, wind, snow breakage
- 3.6.2.2 Floods, droughts
- 3.6.2.3 Avalanches
- 3.6.3 Biotic hazards
  - 3.6.3.1 Damage caused by insects
  - 3.6.3.2 Game situation
    - 3.6.3.2.1 Results of surveys, game influence monitoring
    - 3.6.3.2.2 Browsing damage caused by cloven-hoofed game
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- 3.6.4 Utilisation for leisure-time activities and tourism
- 3.7 Protection forest (protective forest declared by official notice, site- and object protecting forest, shelterbelts, cover of the upper-line timber zone)**
  - 3.7.1 Protective forests declared by official notice
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    - 3.7.6.3 *Area planning projects (optional)*
    - 3.7.6.4 *Hazard potential areas (optional)*
- 3.8 Restricted areas**
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- 3.9 Forests with special habitats according to Article 32 a Forest Act**
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3.9.4 National parks

### **3.10 Declared recreational forests**

### **3.11 Protected areas, conservation areas and other object categories**

3.11.1 Water: Springs

3.11.2 Water: Water conservation areas

3.11.3 Water: Water protection areas

3.11.4 Nature conservation: Nature parks

3.11.5 *Forest: Forest genetic resources (optional)*

3.11.6 *Forest: Technical Forestry Plans according to Articles 9 and 10 Forest Act (optional)*

3.11.7 *Landscape: Landscape protection areas (optional)*

3.11.8 *Nature conservation: Natural monuments (optional)*

3.11.9 *Hunting: Game reserves (optional)*

3.11.10 *Other topics (tourism, forest pedagogy) (optional)*

## **4 Forests and functional areas**

**4.1 Productive function**

**4.2 Protective function**

**4.3 Beneficial function**

**4.4 Recreational function**

**4.5 Summary of the results of the survey**

**4.6 Community FDP**

4.6.1 *Community data sheets (optional)*

## **5 Conclusions and prospects**

## **6 Data sheets**

## **7 Lists**

**7.1 List of maps**

**7.2 List of figures**

**7.3 List of tables**

**7.4 List of references**

### 5.3 Mandatory presentation on maps in the textual part

- Preparation: Provincial agency
  - K-1 Overview map district including ÖK (Österreichische Karte = Austrian Map) lines of intersection and forester district services
  - K-2 Overview map district section of the geological map
  - K-3 Overview map district growth areas
- Preparation: WEP-Austria-Digital
  - K-4 Overview map district with **key functions**
  - K-5 Overview map district **productive function**
  - K-6 Overview map district **protective function** with **three** colour shades for the values
  - K-7 Overview map district **beneficial function** with **three** colour shades for the values
  - K-8 Overview map district **recreational function** with four colour shades for the values (including recreational function with value 0)
  - K-9 Forest area cover **and** forest area dynamism

All presentations on maps have to be lettered in a standardised way (Table K-x and *designation of map*) and provided with a reference.

### 5.4 Optional presentation on maps in the textual part or in the map part (special maps Pillar C 2)

Other optional presentations on maps refer thematically to the object categories of the special maps - Pillar C 2 of the plan topics (see chapter 7.7) and have to be set up in the textual part or in the map part of the FDP. The numbering is consecutive from K-11 onwards.

K-10 Community FDP

K-11 ...

All presentations on maps have to be lettered in a standardised way (Table K-x and *designation of map*) and provided with a reference.

## 5.5 Forest area cover, forest area dynamism and afforestations

### 5.5.1 Forest area cover and forest area dynamism

The representation of the forest area cover and forest area dynamism in tables and maps takes place on the basis of the data of the regional information of the Federal Office of Metrology and Surveying (BEV) at community level and **cadastral community level** at the time of revision with **special emphasis** on the areas with very low forest cover.

#### To be represented are:

- A table with the indication of the current forest area cover (in ha and %) and the forest area dynamism (increase or decrease in ha and %) with marking of the cadastral communities in colours, those with very low forest cover (0-20 %) in light red and those with very low forest cover (0-20 %) and negative forest area dynamism is dark red.
- A map K-9 with the current forest area cover of the cadastral communities. The forest cover of the cadastral communities is represented in 10 % shadings from light green to dark green.

additional labelling for forest area dynamism ↑ (increasing) or ↓ (decreasing)

Table and map provide important information for official forestry experts for example in clearing procedures.

The table forest area cover and the thematic map K-9 forest area cover and forest area dynamism are generated with the internet application WEP-AUSTRIA-DIGITAL and made available.

**Note:** Changes of the political structure at the level of the community or cadastral community within the plan area (political district or forest district) shall be forwarded by the Provincial Forestry Directorate/provincial agency, indicating the **serial numbers** (e.g. cadastral community number **KGNR** or municipal code **GMKZ**) **Old and New** to the operator of the internet application WEP-AUSTRIA-DIGITAL.

### 5.5.2 Measures on afforestation

The **mandatory** definition and description of measures for afforestation according to Article 7 lit. c (1) Forest Act takes place in **under-forested planning areas (political district or forest**



**district with a forest cover of less than 20 %) and here only on the functional areas whose percentage of forestation is less than 20 %.**

The definition and description of measures on afforestation according to Article 7 lit. c. 1 Forest Act in parts of the planning area with a percentage of forested area of **more than 20** is, however, **optional**.

The definition and description takes place by means of the extension of the input form functional area (see Chapter 6.2) of the WEP-AUSTRIA-DIGITAL as follows:

- Planning on the whole functional area or
- Planning on urgent partial areas or
- Other measures

## **5.6 Separation of forest and pasture**

The **planning and documentation** concerning the separation of forest area, agricultural area and alpine pasturage area takes place according to **Article 7 lit. c (2) Forest Act** in all planning areas, where it is advantageous for a better development of the effects of the forest, such as in the upper timberline zone. The definition and description of the measures, which might be required for the separation of forest and pasture, only take place on those functional areas, where the following applies:

The definition and description take place by means of the **extension of the input form functional area (see Chapter 6.2) of the WEP-AUSTRIA-DIGITAL as follows:**

- The cause of the impairment of the key function is agriculture  
**and**
- the sub-category of the cause of the impairment of the key function is forest pasture  
**and**
- the measure is planned  
**then**
- this measure has to be documented:

**If measures are required** then there is a choice between

- Redemption of rights of pasture  
or

- Creation of exclusive pasturage areas  
or
- Fencing  
or
- Accompanying measures  
or
- Other measures

## 5.7 List of figures

The list of figures has to be set up in an Annex to the FDP. It comprises diagrams and figures which are, on the one hand, made available by **WEP-AUSTRIA-DIGITAL** and, on the other hand, such contents, which are added by the author of the plan himself/herself to the textual part of the FDP.

All figures and diagrams have to be lettered in a standardised way (*Fig. number of figure* and *name of figure*) and provided with a reference.

## 5.8 List of tables

The list of tables has to be set up in an Annex to the FDP. It comprises tables, which are, on the one hand, made available by **WEP-AUSTRIA-DIGITAL**, and, on the other hand, such contents which are added by the author of the plan himself/herself to the textual part of the FDP. All tables have to be lettered in a standardised way (*Table number* and *table name*) and provided with a reference.

Templates for these tables can be downloaded via the internet application WEP-AUSTRIA-DIGITAL.

Table 9 List of tables in the textual part

<b>Mandatory tables:</b>
1 Forest area cover and forest area dynamism (made available by WEP-AUSTRIA-DIGITAL)
2 Forest area according to types of farm (data from the Austrian Forest Inventory)
3 Clearings according to purpose of clearing
4 Protected areas according to Article 32a Forest Act (contents of Pillar C 1)
5 Contents of Pillar A (results of the surveys made available by WEP-AUSTRIA-DIGITAL)
<p><b>Functional areas</b></p> <ul style="list-style-type: none"> <li>Productive function</li> <li>Protective function</li> <li>Beneficial function</li> <li>Recreational function</li> </ul> <p><b>Circular functional areas</b></p> <ul style="list-style-type: none"> <li>Productive function</li> <li>Protective function</li> <li>Beneficial function</li> <li>Recreational function</li> </ul> <p><b>Shelterbelts</b></p> <p><b>Upper timberline zone</b></p> <p><b>Mandatory pointer</b></p> <ul style="list-style-type: none"> <li>Protective forest declared by official notice (S)</li> <li>Protective forest declared by official notice (W)</li> <li>Declared recreational forest (E)</li> <li>Unlimited restricted forested area</li> <li>Restricted military area</li> <li>Declared site-protecting forest</li> <li>Declared object-protecting forest</li> <li>References</li> <li>Water conservation areas</li> <li>Water protection areas</li> <li>Natural parks</li> </ul>
6 List of mandatory appointment of forest officers in the forest district
<b>Optional tables:</b>
7 Administrative survey in the forest district
8 Communities according to forest supervision stations
9 Precipitation and temperature
10 Number of forestry staff in the forest district
11 Volume of timber harvested according to the timber harvest report (HEM)

## Optional tables:

---

12 Distribution of tree species according to forest areas and reserves in the commercial forest (according to the Austrian Forest Inventory)

---

13 Forest area, reserves and increment according to types of holding and ownership (according to the Austrian Forest Inventory)

---

14 Average annual utilisation in the commercial forest according to types of holding and ownership (according to the Austrian Forest Inventory)

---

15 Opening up of forests according to types of holding and ownership (according to the Austrian Forest Inventory)

---

16 Structure of roads which are passable by trucks according to type of utilisation (according to Austria Forest Inventory)

---

17 Forest road construction /Construction costs / Subsidies

---

18 Shooting statistics of the forest district

---

19 Water conservation areas in the forest district

---

20 Hazard Zone Plans in the forest district

---

21 Special forest sites in the forest district

---

22 Technical Forestry Plans included in the Forest Development Plan according to Article 9 para. 5 and 6 Forest Act

---

23 Additional maps used on the topics afforestation or arrangement of forest and pasture

---

24 Contents of Pillar B

**Forest-relevant object categories**

Special forestry site

Forest-genetic resources

**Restricted extra-forestry area**

Restricted hunting area

Other restricted areas

---

## 5.9 Key function areas and values of the forest functions

This chapter of the textual part should be used for formulating an informative survey on the **overall development with relevance for forestry in the planning district**. If required, the significant data developed in the FDP should be referred to and used as a support. In a summary evaluation by the person who has worked out the plan the forest conditions of the district, in particular regarding the structure and development of the key functions, shall be described.

As regards the key function, **productive function** the share of the area and the percentage in the total forest area shall be indicated in the form of a table and of a diagram after the

description. A map with the key function productive function will be made available K-5 (see Chapter 5.3).

As far as the three key functions **protective function, beneficial function, and recreational function** are concerned the ratio of functional areas shall be indicated after the description in the form of tables and as a diagram, **ranked according to the values (0) 1, 2 and 3** in percent (calculated in relation to the forest area) as well as indicated in ha.

Separated according to functions, the maps for the protective function K-6 and the beneficial function K-7 with the values 1 to 3 are made available in three colour shades and the recreational function K-8 with the values 0 to 3 is made available in four colour shades (see Chapter 5.3).

Diagrams, tables and maps are prepared with the internet application **WEP-AUSTRIA-DIGITAL** and downloaded there.

As far as the individual forest functions are concerned, in particular the following aspects have to be taken into consideration:

#### **Productive function**

- As regards the productive function, special attention shall be paid to a comprehensive description of the significance of the productive function, and reference shall be made to the data of the forestry and the timber industries in **Chapter 3.5.2 of the partial plan** (regarding resources, utilisations and increment).

#### **Protective function**

- Apart from working out the site-protecting and object-protecting functions, the indication of definitions and of the assessment method, the prevailing types of hazards, local priorities of the necessary protective effect and the OSWi District Framework Planning and land-use projects FWP shall be referred to. Moreover, reference shall be made to **Chapter 3.7 of the partial plan**.
- Furthermore the topics noise control and light control (according to Article 7 Forest Act) shall be dealt here from a technical point of view, if required.

### **Beneficial function**

- This function is to be represented in a comprehensible way with a view to the overall importance for the planning district and in this context, attention has to be paid to the two aspects **climate and water balance** and the **purification and regeneration of air and water**. Reference shall be made to the chapters relevant for the beneficial function.

### **Recreational function**

- In planning areas and/or partial areas of them, where the utilisation for leisure-time activities and tourism plays a special or increasing role, the great importance of the recreational function shall be described in a comprehensible way. Fields of conflicts, proposals for solutions and trends can be laid down (see **Chapter 2.2 of the partial plan**).

## **5.10 Measures and prospects**

This Chapter shall be used first and foremost to make also a critical analysis of the development in the planning area so far, in particular with a view to the legal requirements concerning the best possible way of meeting and ensuring the forest effects (Article 6 para. 2 Forest Act), to describe the necessary measures and to deal in this context with obstacles, which have prevented the goal attainment.

The provisions according to Article 6 para. 4 Forest Act, where the coordination of all public interests, which have to be taken into account and are important in this respect, shall be taken into consideration in this context (general land-use planning, transport planning, nature conservation, hunting, tourism and others).

A summary of the planning results and an outlook for the future conclude the textual part (see **Chapter 4.5 of the partial plan**).

## 5.11 Community FDP

The Community-FDP **K-10** is available as a valuable service offer with the most important key data of the forest development planning for the individual community and can be integrated optionally by the provincial or district authorities in the partial plan.

The community map is developed with the internet application WEP-AUSTRIA-DIGITAL and downloaded there.

A textual or tabular description of the Community FDP in the partial plan can take place under **Chapter 4.6 of the partial plan.**

# 6 Data part

## 6.1 Data collection

All characteristics of the functional areas, circular functional areas, shelterbelts and FDP pointers are recorded via the internet application **WEP-AUSTRIA-DIGITAL**. The internet application is available in the web browser at [www.waldentwicklungsplan.at](http://www.waldentwicklungsplan.at).

## 6.2 Functional areas (attributes)

**Federal Province** (name of the Federal Province)

**District** (name of the political district)

**BFI** (name of the District Forest Inspection Service)

**INDEX FUFLNR (eight-digit number from the FDP database)**

**ÖK50-UTM** (phyllotaxis and designation of the ÖK50-UTM)

**Wert\_Kz** (three-digit number from the FDP database)

**Key function** (productive function, protective function, beneficial function, recreational function)

**Cover of the upper timberline zone** (upper timberline zone / no upper timberline zone, if timberline zone, then selection of the area of the upper timberline zone in the functional area smaller or bigger than 80 %) see Chapter 4.3.9.

**GIS area** (GIS calculation)

**Forest area** (forest area of the functional area in m<sup>2</sup>) (GIS calculation)

**Percentage of forestation** (share of forest area in the functional area in %) (GIS calculation)

**X-KOORD** (X coordinate of the polygon anchor point) (GIS calculation) percentage

**Y-KOORD** (Y coordinate of the polygon anchor point) (GIS calculation)

**Gen\_Jahr** (year of authorisation four-digit JJJJ, will be corrected by the Federal Ministry, if required)

**Audit** (for example 2<sup>nd</sup> audit)

**Reasons for the assessment of the functions** protective function, beneficial function, and recreational - function see Chapter 4.2.1



**Object-protecting function** see Chapter 4.3.2  
**Impairment of the key function** see Chapter 4.8.1  
**Causes of the impairment** see Chapter 4.8.2  
**Countermeasures against impairment** see Chapter 4.8.3  
**Urgency of the countermeasures** see Chapter 4.8.4  
**Cover and dynamic development of forest areas** see Chapter 5.5.1  
**Measures on afforestation** see Chapter 5.5.2  
**Separation of forest and pasture** see Chapter 5.6

### 6.3 Circular functional areas (attributes)

**Federal Province** (name of the Federal Province)  
**District** (name of the political district)  
**BFI** (name of the District Forest Inspection Service/forest district)  
**INDEX KFLNR (eight-digit number from the FDP database)**  
**Key function** (written in full productive function, protective function, beneficial function, recreational function)  
**ÖK50-UTM** (phyllotaxis and designation of the ÖK50-UTM)  
**X-KOORD** (X coordinate of the polygon anchor point) (GIS calculation)  
**Y-KOORD** (Y coordinate of the polygon anchor point) (GIS calculation)  
**Gen\_Jahr** (year of authorisation four-digit JJJJ, will be corrected by the Federal Ministry, if required)  
**Audit** (for example 2<sup>nd</sup> audit)

### 6.4 Shelterbelts (attributes)

**Federal Province** (name of the Federal Province)  
**District** (name of the political district)  
**BFI** (name of the District Forest Inspection Service/forest district)  
**Audit** (for example 2<sup>nd</sup> audit)  
**Cadastral community** (number of the cadastral community)  
**ÖK50-UTM** (phyllotaxis and designation of the ÖK50-UTM)  
**X-KOORD** (Y coordinate of the wrapping polygon anchor point) (GIS calculation)  
**Y-KOORD** (Y coordinate of the wrapping polygon anchor point) (GIS calculation)  
**INDEX WSANR (eight-digit number from the FDP database)**  
**Length of the shelterbelt** (in m)

### **Area of the shelterbelt**

**Object-protecting class** (utilised agricultural area OSKL III 50000-37, streets and ways, OSKL I/II or III, residential buildings OSKL III 11100-01. Other objects)

**Fulfilment of the function** accomplished or insufficient

**Description of measures** (need for rehabilitation)

## **6.5 Pointer areas (attributes)**

FDP pointers are documented with the respective form **pointer** of the internet offer WEP-AUSTRIA-DIGITAL.

Mandatory and optional pointer areas with an area extending over more than 10 ha are represented as polygons, those **less or equal to 10 ha** as **points**.

**Federal Province** (name of the Federal Province)

**District** (name of the political district)

**BFI** (name of the District Forest Inspection Service/forest district)

**INDEX ZGNR (nine-digit number from the FDP database)**

**ÖK50-UTM** (phyllotaxis and designation of the ÖK50-UTM) **Area** (total area of the pointer area in ha)

**X-KOORD** (X coordinate of the point and/or polygon anchor point) (GIS calculation)

**Y-KOORD** (Y coordinate of the point and/or polygon anchor point) (GIS calculation)

**Selection (mandatory pointers) of Pillar A:** Protective forest (W), declared recreational forest (E), unlimited restricted forest area, restricted military area, declared site-protecting forest, declared object-protecting forest, springs, water conservation area, water protection area, natural park

**Selection (optional pointers) of Pillar B:** Special forestry site, stock of forest-genetic resources, restricted hunting area, other restricted area

**Designation**

**Description**

**Geometrical representation**

**Scale of recording**

**Up-to-dateness**

**Name of the authority**

**Number of decree, date of decree**

## 6.6 Data output

The internet offer WEP AUSTRIA DIGITAL makes available reports, tables, charts and maps (Pillars A, B, C 1) of the planning areas in an automated way. It comprises standardised evaluations, results, surveys and maps on the FDP objects and plan issues covered by the internet application WEP-AUSTRIA-DIGITAL.

The representations on maps **K-1**, **K-2** and **K-3** and the special maps of Pillar C 2 are **not** made available by the internet offer WEP-AUSTRIA-DIGITAL.

### Map part of the Forest Development Plan

- **Map part** FDP map of the planning area of the key functions with the contents of the PILLARS A and B scale 1:50,000
- **Map part** Special map of the planning area with the planning issues Article 32a Forest Act with the contents of Pillar C 1 scale 1:50,000

### Textual part of the Forest Development Plan

- **Forest function maps** (key function **K-4**, beneficial function **K-5**, protective function **K-6**, welfare function **K-7**, recreational function **K-8**) coloured according to value
- Overview map of the **forest cover** and **forest area dynamism K-9** at cadastral community level
- Community FDP **K-10**
- **Pie chart** of the area percentages of the key functions
- Table **Forest area dynamism**
- Table of the **FDP pointers**
- Table **Summary** of the **results of the surveys**

### Data part of the Forest Development Plan

- Report of the filled-in data sheets of the **functional areas**
- Report of the filled-in data sheets of the **circular functional areas**
- Report of the filled-in data sheets of the **shelterbelts**
- Report of the filled-in data sheets of the **FDP pointers**

**Note:** Tables, evaluations and maps going beyond this standard shall be established by the agency itself independently, and lettered in the document.

## **6.7 Data export**

The overall export of databases from the WEP-AUSTRIA-DIGITAL aims at the establishment of data links, which serve as a starting point for further evaluation (tables, reports, maps) of the FDP data. The key fields for this link are the respective indices of the FDP objects.

# 7 Map part

## 7.1 General remarks

According to Article 8 para. 1 (a) Forest Act, and in particular Article 4 para. 2 to 6 Ordinance on the Forest Development Plan, the facts (plan topics) shall be represented in a cartographic form.

Due to digitisation, extent and possibilities of representing plan topics in and around the forest have permanently increased. As a result of the comprehensive planning mandate for forest area planning it is required to add also current planning topics and/or planning topics, which might become relevant in future, and which might offer supplementary information for the forest and its planning-relevant surrounding, to the respective FDP in textual or also cartographic form.

The key task is the representation of forest conditions for **each partial plan of the forest function map highlighting the key functions** (FDP map). Special attention shall be paid to the correct entry of data, in particular with a view to the correct technical-content-related **consistency** between **textual part**, **data part** and **map part**.

The spatial data of the FDP partial plan are made available in the secure area (access authorisation required) of the internet application **WEP-AUSTRIA-DIGITAL** for download. A **cartographic processing** of the mandatory planning topics in the district or provincial agencies is therefore **not required**.

In order to ensure the required readability of the FDP map and still enable the compliance with the special requirements for the planning area (planning topics) a differentiation is made between mandatory planning topics and optional planning topics (see list and graph of the planning topics below in the **Pillar Model Chapter 7.2**)

Optional planning topics can be represented in the form of special maps, where the scale and the type of representation can be freely selected and described in the textual part. Here as well attention has to be paid to clarity, good recognisability and readability of the lettering of the planning contents as well as of the basic map laying behind it.

The **subdivision into mandatory and optional planning topics** shall be complied with for reasons of federal uniformity. It contributes considerably to reaching the goals of forestry area planning and to the understanding of its tasks.

### 7.1.1 Setting up and transmission of geographic data

The FDP map is set up by the internet application WEP-AUSTRIA-DIGITAL.

The **setting up of the spatial data sets** of the FDP objects **forest functional areas, circular functional areas, shelterbelts, upper timberline zone and FDP pointers** takes place at the **provincial authorities**.

The spatial data sets are uploaded via the internet application WEP-AUSTRIA-DIGITAL. The datasets are checked for completeness and geometrical consistency with the contents of the database. **Faulty or inconsistent spatial data sets cannot be uploaded** in the system.

### Data origin of spatial databases

The spatial databases of the Pillars A and B are provided by the provincial agencies, those of Pillar C1 by the Federal Research and Training Centre for Forests, Natural Hazards and Landscape BFW and the spatial databases of Pillar C2 can be provided by the provincial agencies and enclosed with the textual section as PDF map.

For the topics of Pillar A and B **template shapes** are available. Objects with an area of < 10 ha are represented on the FDP map and on the special map C 1 with a point symbol.

### 7.1.2 Geometries and indices of spatial data sets

Templates for the setting up of spatial datasets with geometric and attribute specifications can be downloaded via the internet application WEP-AUSTRIA-DIGITAL.

- Polygon geometry functional areas shape file
- Index FUFLNR see Chapter 6.2 and Chapter 7.3.1
- Point geometry circular functional areas shape file
- Index KFLNR see Chapter 6.3 and Chapter 7.3.2
- Line geometry shelterbelts shape file
- Index WSANR see Chapter 6.4 and Chapter 0
- Polygon geometry pointer shape file
- Index ZGNR (nine-digit number from FDP database) see Chapter 6.5 and Chapter 0
- Point-geometry timberline zone < 80% of the functional area shape file
- see Chapter 7.3.4.

## 7.2 Mandatory and optional plan topics - Pillar model and representation

The structure below and the degree of the mandatory character of plan topics and map contents on the forest functional map (FDP map) and on special maps result on the one hand from the requirements according to the Forest Act and/or the relevant requirements of the Ordinance on the Forest Development Plan (FDP Ordinance) and, on the other hand, from the definitions of the individual planning categories.

Special attention has to be paid to the fact that **for all planning topics** whose representation is mandatory and/or object categories of **Pillar A** of the forest functional map and/or the FDP map, there is a **relation to the assessment of the four key functions**, whereas, on the contrary the planning topics and/or object categories of the **Pillars B, C1 and C2** represent additional technical information and exert NO direct or indirect influence on the assessment of the function.

The map contents are subdivided according to four Pillars A, B, C1 and C2.

See also the following graph for that purpose:

Table 10 Overview Pillar model; planning topics of the FDP map (Pillars A and B) highlighted.

A	B	C 1	C 2
<b>FDP MAP</b>		<b>Special maps</b>	
Automatic development by WEP-AUSTRIA-DIGITAL			Preparation by provincial authorities
<b>Mandatory</b> (made available by the provincial authority)	<b>Optional</b> (made available by the provincial authority)	<b>Mandatory</b> (made available by the Federal Research and Training Centre for Forests)	<b>Optional</b> (as PDF map part of the textual part submitted)
<b>Optional pointers</b>		<b>Article 32a: Forest Act</b>	
<b>Functional areas</b> Productive function Protective function Beneficial function Recreational function <b>Circular functional areas</b> Productive function Protective function Beneficial function Recreational function <b>Shelterbelts</b> <b>Timberline zone</b>	<b>Forest-relevant object categories</b> Special forestry site Forest-genetic resources <b>Restricted extra-forestry area</b> Restricted hunting area Other restricted areas	<b>Forest-relevant object categories</b> Natural Forest Reserves Federal Government <b>Object categories relevant for nature conservation</b> Natura 2000 areas Natural parks Nature conservation areas	<b>Object categories of torrent and avalanche control</b> Torrent catchment areas Avalanche catchment areas Hazard zone plans Land use projects Protection forest projects Hazard potential areas <b>Object categories relevant for nature conservation</b> Landscape protection areas Landscape conservation areas Natural monuments Natural forest reserves Federal Province <b>Hunting object categories</b> Hunting areas Game reserves Habitat corridors <b>Technical forestry plans</b> <b>Article 9 para. 5 Forest Act</b> <b>Other categories</b> of forest-technical importance for the planning area (for example tourism, forest pedagogics, forest culture)
<b>Mandatory pointers</b>			
Protective forest by official notice (S) Protective forest by official notice (W) Declared recreational forest (E) Unlimited restricted forestry area Restricted military area Declared site-protecting forest Declared object-protecting forest Springs Water protection areas Water conservation areas Natural parks			



### 7.2.1 Representation of plan topics Pillar A (Mandatory plan topics of the FDP map)

All planning topics of Pillar A are in relation to the assessment of the function

Their mandatory and uniform nationwide representation on the forest functional map (FDP map) comprises, according to the requirements of the Ordinance on the Forest Development Plan and the definitions: Functional areas, circular functional areas, mandatory pointer areas, shelterbelts and timberline zone.

**Remark on circular functional areas and areas obligatorily to be represented as pointer areas:**

**Circular functional areas** symbolise forest functions within **one** functional area, which show **in any case** forest functions **deviating** from the assessment of this functional area and which are **smaller or equal to ten hectares**.

**Areas which have to be represented obligatorily as pointer areas** symbolise planning topics or object categories within **one or several functional** areas which

- Illustrate the **derivation of the selected key function** for the functional areas concerned or
- The **deviation from the key figure** of the surrounding forest functional area.

The planning topics (and/or object categories) of Pillar A are developed **in a nationwide uniform way** with the internet application WEP-AUSTRIA-DIGITAL and made available

### 7.2.2 Representation of the planning topics Pillar B (FDP map)

- However, pointer areas, which are to be represented **optionally**, symbolise for one or several functional areas **additional technical information** on the functional areas concerned, which have **no influence on the assessment of the function**.

The plan topics (and/or object categories) of Pillar B are set up by the provincial authorities and made available **nationwide** with the internet application WEP-AUSTRIA-DIGITAL **in a standardised way**.

### 7.2.3 Presentation of the plan topics Pillar C 1 (special map)

The plan topics (and/or object categories) of Pillar C1 (special map according to Article 32 a Forest Act) are set up and made available **nationwide** with the internet application WEP-AUSTRIA-DIGITAL **in a standardised way**.

Remark on the plan topic national parks:

National parks shall be taken into consideration with the assessment of the function, in particular with a view to their effect on the assessment of the recreational function, due to increased visitor traffic, building of tourist establishments and so on and so forth.

However, their representation takes place in the form of the “Special map according to Article 32 a Forest Act” Pillar C 1 and NOT on the FDP map.

### 7.2.4 Representation of the plan topics of Pillar C 2

The type of representation of the **optional** potential plan topics in the form of one or even several special maps is **basically freely selectable**.

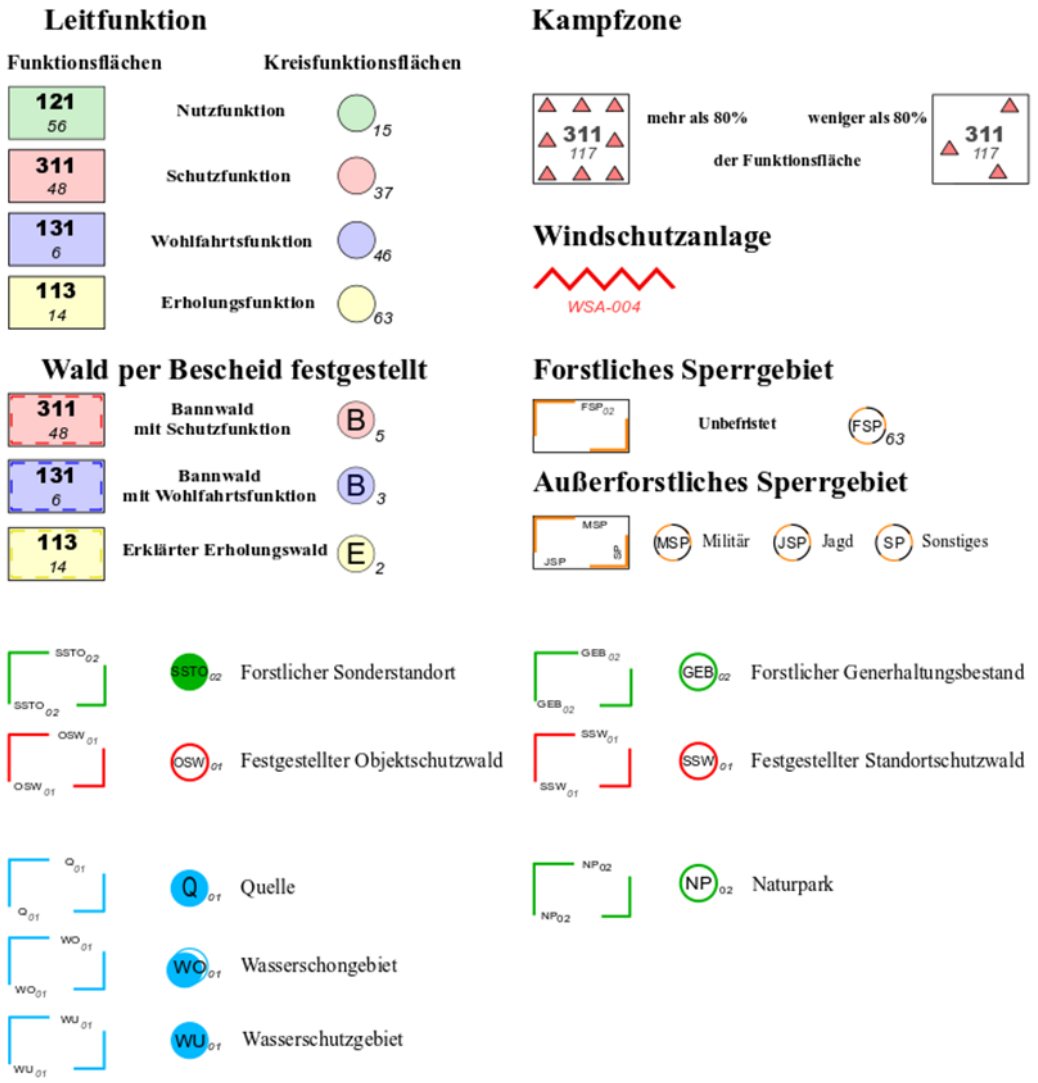
However, it is recommended to use for the **representation of plan topics**, for which there exist **well-established, or possibly even standardised** (by ordinance or decree or technical instructions) **forms of representation** of the legally or technically competent authorities or institutions, **to use them or take them over from existing planning systems**.

If such well-established or standardised symbols do not exist, **the well-established symbols of the FDP Guideline applicable so far** (from 2012) can still be used.

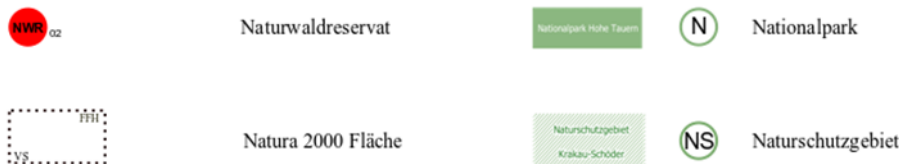
Figure 1 Graphical representation of the plan topics Pillars A, B, C 1- map legend

Graphische Darstellung der Planthemen Säule A, B, C 1 – Kartenlegende

# WALDENTWICKLUNGSPLAN



## SONDERKARTE gemäß § 32 a Forstgesetz



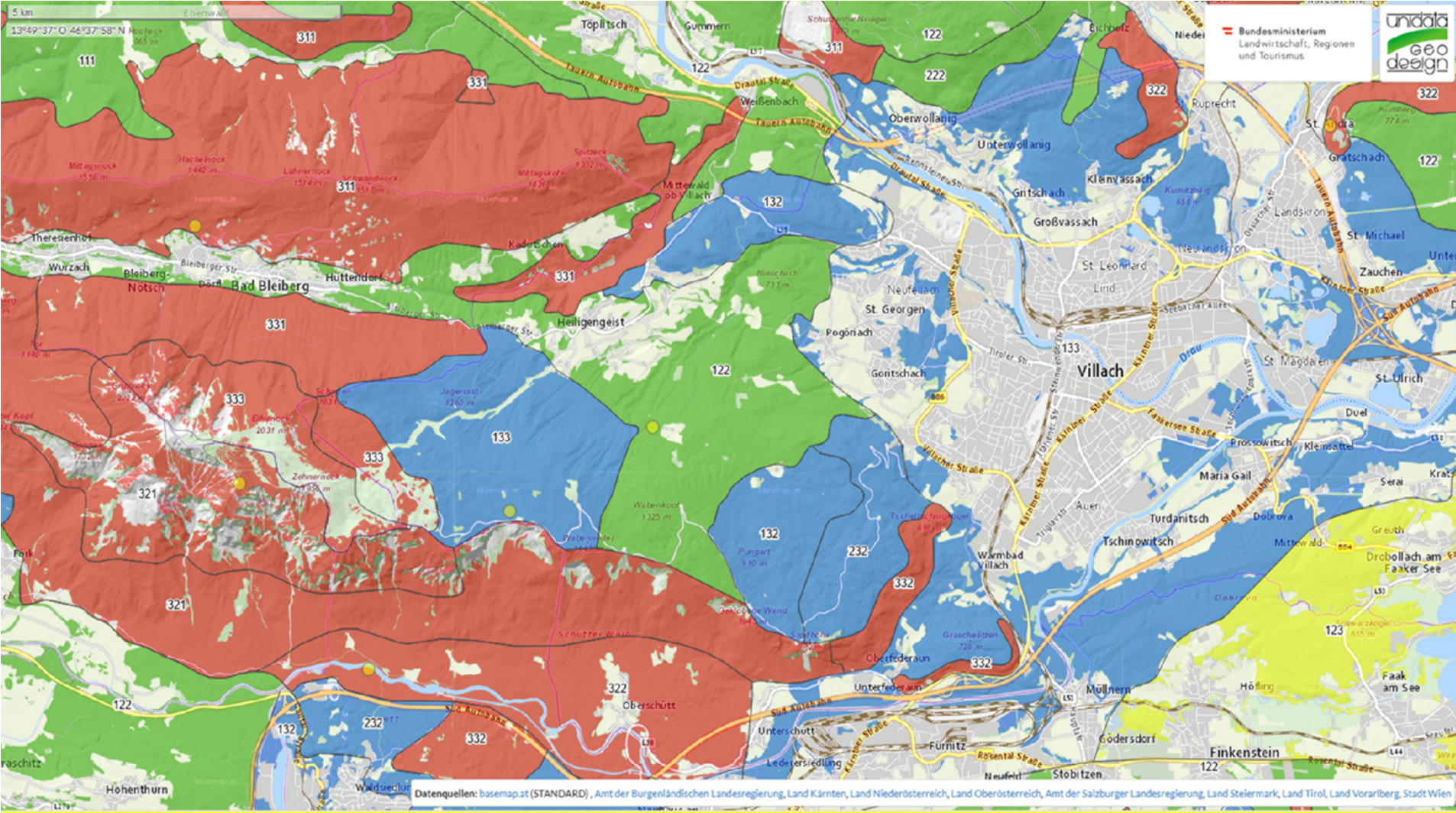
### Datenquellen

Bundesministerium für Landwirtschaft, Regionen und Tourismus  
 Bundesforschungs- und Ausbildungszentrum für Wald, Naturgefahren und Landschaft,  
 Landesdienststellen, Umweltbundesamt, Bundesamt für Eich- und Vermessungswesen

1:50.000



Figure 2 Section FDP map Villach from the WEP Austria Digital



## 7.3 Mandatory plan topics on the FDP map Pillar A

### 7.3.1 Functional areas

<b>Geometry</b>	<b>Polygon</b>
<b>Contents</b>	Functional areas
<b>Index</b>	Field name <b>FUFLNR</b> , Field type <b>numeric</b> , Length <b>8</b> , Decimal places <b>0</b> <b>Example</b> Murau (61412), consecutive number <b>51</b> Data entry <b>61412051</b>
<b>Nomenclature</b>	<b>FUFL_BEZNR_JAHR.shp</b> <b>Example</b> FUFL_61412_2019.shp
<b>Note</b>	Indications on the assessment of functions of water areas and built-up or dedicated settlement areas see Chapter 4.6 Indications on areas without assessment of the function see Chapter 4.7 Indications on the plant cover in the timberline zone see Chapter 7.3.4 Measures on reforestation see Chapter 5.5.2 Indications on separation of forest and pasture see Chapter 5.6

### 7.3.2 Circular functional areas

<b>Geometry</b>	<b>Point</b>
<b>Contents</b>	Circular functional areas
<b>Index</b>	Field name <b>KFLNR</b> , Field type <b>numeric</b> , Length <b>8</b> , Decimal places <b>0</b> <b>Example</b> Murau (61412), consecutive number <b>37</b> Data entry <b>61412037</b>
<b>Nomenclature</b>	<b>KFL_BEZNR_JAHR.shp</b> <b>Example</b> KFL_61412_2019.shp
<b>Note</b>	Explanations see Chapter 6.3

### 7.3.3 Shelterbelts

<b>Geometry</b>	<b>Line (multiple)</b>
<b>Contents</b>	Shelter belts
<b>Index</b>	Field name <b>WSANR</b> , Field type <b>numeric</b> , Length <b>8</b> , Decimal places <b>0</b> <b>Example</b> Murau (61412), consecutive number <b>3</b> Data entry <b>61412003</b>
<b>Nomenclature</b>	<b>WSA_BEZNR_JAHR.shp</b> <b>Example</b> WSA_61412_2019.shp
<b>Note</b>	Explanations see Chapter 4.3.4 and 6.4

### 7.3.4 Plant cover of the upper timberline zone

<b>Geometry</b>	<b>Point, polygon</b>
<b>Contents</b>	Functional areas
	<b>Upper timberline zone &gt; 80 % of the functional area</b> Total functional area (see Chapter 7.3.1)
	<b>Upper timberline zone &lt; 80 % of the functional area</b> <b>Data collection:</b> Upper timberline zones shall be localised /digitised in a separate <b>points shape</b> (see Chapter 7.1.2)
<b>Nomenclature</b>	<b>KA_LNDNR_JAHR_PKT.shp</b> <b>Example</b> KA_STMK_2019_PKT.shp
<b>Note</b>	Only the upper timberline zone with the value S3 is represented. Explanations see Chapter 4.3.9

## 7.4 Mandatory pointers on the FDP map Pillar A

### 7.4.1 Protective forest declared by official notice (protective function, beneficial function)

<b>Geometry</b>	Point, polygon
<b>Contents</b>	Pointer, functional areas
<b>Index</b>	Field name <b>ZG NR</b> , Field type <b>numeric</b> , Length <b>9</b> , Decimal places <b>0</b> <b>Example</b> Murau (61412), consecutive number <b>09</b> Data entry <b>61412009</b> Data entry <b>614120109</b>
<b>Nomenclature</b>	<b>ZG_BEZNR_JAHR_POL.shp</b> <b>Example</b> ZG_61412_2019_POL.shp
<b>Attribution</b>	<b>00xx</b> Protective forest declared by official notice – protective <b>01xx</b> Protective forest declared by official notice – beneficial
<b>Note</b>	Explanations see Chapter 4.3.3 (protective function) and Chapter 4.4.1 (beneficial function)

### 7.4.2 Declared recreational forest (recreational function)

<b>Geometry</b>	Point, polygon
<b>Contents</b>	Pointer
<b>Index</b>	Field name <b>ZG NR</b> , Field type <b>numeric</b> , Length <b>9</b> , Decimal places <b>0</b> <b>Example</b> Murau (61412), consecutive number <b>04</b> Data entry <b>614120204</b>
<b>Nomenclature</b>	<b>ZG_BEZNR_JAHR_POL.shp</b> <b>Example</b> ZG_61412_2019_POL.shp
<b>Attribution</b>	<b>02xx</b> Declared recreational forest
<b>Note</b>	Explanations see Chapter 4.5.1

### 7.4.3 Unlimited restricted forest area

<b>Geometry</b>	<b>Polygon</b>
<b>Contents</b>	Pointer
<b>Index</b>	Field name <b>ZGNR</b> Field type <b>numeric</b> , Length <b>9</b> , Decimal places <b>0</b> Example Murau (61412), consecutive number 05 Data entry 614120305
<b>Nomenclature</b>	<b>ZG_BEZNR_JAHR_POL.shp</b> Example ZG_61412_2019_POL.shp
<b>Attribution</b>	<b>03xx</b> Unlimited restricted forest area
<b>Note</b>	Explanations see Chapter 4.5.1 (Criteria for value 0)

### 7.4.4 Restricted extra-forestry area such as restricted military area

<b>Geometry</b>	<b>Polygon</b>
<b>Contents</b>	Pointer
<b>Index</b>	Field name <b>ZGNR</b> , Field type <b>numeric</b> , Length <b>9</b> , Decimal places <b>0</b> Example Murau (61412), consecutive number <b>03</b> Data entry <b>614122003</b>
<b>Nomenclature</b>	<b>ZG_BEZNR_JAHR_POL.shp</b> Example ZG_61412_2019_POL.shp
<b>Attribution</b>	<b>20xx</b> : Restricted military area

### 7.4.5 Declared object-protecting forest

<b>Geometry</b>	<b>Polygon</b>
<b>Contents</b>	Pointer
<b>Index</b>	Field name <b>ZGNR</b> , Field type <b>numeric</b> , Length <b>9</b> , Decimal places <b>0</b> Example Murau (61412), consecutive number <b>06</b> Data entry <b>614121206</b>
<b>Nomenclature</b>	<b>ZG_BEZNR_JAHR_POL.shp</b> Example ZG_61412_2019_POL.shp
<b>Attribution</b>	<b>12xx</b> Declared object-protecting forest
<b>Note</b>	Explanations see Chapter 2.7 and Chapter 4.3.2 (beneficial function)



## 7.4.6 Declared site-protecting forest

<b>Geometry</b>	<b>Polygon</b>
<b>Contents</b>	Pointer
<b>Index</b>	Field name <b>ZG NR</b> , Field type <b>numeric</b> , Length <b>9</b> , Decimal places <b>0</b> <b>Example</b> Murau (61412), consecutive number <b>08</b> Data entry <b>614121308</b>
<b>Nomenclature</b>	<b>ZG_BEZNR_JAHR_POL.shp</b> <b>Example</b> ZG_61412_2019_POL.shp
<b>Attribution</b>	<b>13xx</b> Declared object-protecting forest
<b>Note</b>	Explanations see Chapter 2.7 and Chapter 4.3.1

## 7.4.7 Springs

<b>Geometry</b>	<b>Polygon</b>
<b>Contents</b>	Pointer
<b>Index</b>	Field name <b>ZG NR</b> , Field type <b>numeric</b> , Length <b>9</b> , Decimal places <b>0</b> <b>Example</b> Murau (61412), consecutive number <b>14</b> Data entry <b>614123014</b>
<b>Nomenclature</b>	<b>ZG_BEZNR_JAHR_POL.shp</b> <b>Example</b> ZG_61412_2019_POL.shp
<b>Attribution</b>	<b>30xx</b> : Springs

## 7.4.8 Water conservation areas

<b>Geometry</b>	<b>Polygon</b>
<b>Contents</b>	Pointer
<b>Index</b>	Field name <b>ZG NR</b> , Field type <b>numeric</b> , Length <b>9</b> , Decimal places <b>0</b> <b>Example</b> Murau (61412), consecutive number <b>16</b> Data entry <b>614123816</b>
<b>Nomenclature</b>	<b>ZG_BEZNR_JAHR_POL.shp</b> <b>Example</b> ZG_61412_2019_POL.shp
<b>Attribution</b>	<b>38xx</b> : Water conservation area

## 7.4.9 Water protection areas

<b>Geometry</b>	<b>Polygon</b>
<b>Contents</b>	Pointer

<b>Geometry</b>	<b>Polygon</b>
<b>Index</b>	Field name <b>ZG NR</b> , Field type <b>numeric</b> , Length <b>9</b> , Decimal places <b>0</b> <b>Example</b> Murau (61412), consecutive number <b>05</b> Data entry <b>614123905</b>
<b>Nomenclature</b>	<b>ZG_BEZNR_JAHR_POL.shp</b> <b>Example</b> ZG_61412_2019_POL.shp
<b>Attribution</b>	<b>39xx</b> : Water protection area

### 7.4.10 Nature parks

<b>Geometry</b>	<b>Polygon, point</b>
<b>Contents</b>	Pointer
<b>Index</b>	Field name <b>ZG NR</b> , Field type <b>numeric</b> , Length <b>9</b> , Decimal places <b>0</b> <b>Example</b> Murau (61412), consecutive number <b>33</b> Data entry <b>614123303</b>
<b>Nomenclature</b>	<b>ZG_BEZNR_JAHR_POL.shp</b> <b>Example</b> ZG_61412_2019_POL.shp
<b>Attribution</b>	<b>33xx</b> : Nature parks

## 7.5 Optional pointers on the FDP map Pillar B

### 7.5.1 Special forestry site

<b>Geometry</b>	<b>Polygon</b>
<b>Contents</b>	Pointer
<b>Index</b>	Field name <b>ZG NR</b> , Field type <b>numeric</b> , Length <b>9</b> , Decimal places <b>0</b> <b>Example</b> Murau (61412), consecutive number <b>03</b> Data entry <b>614121003</b>
<b>Nomenclature</b>	<b>ZG_BEZNR_JAHR_POL.shp</b> <b>Example</b> ZG_61412_2019_POL.shp
<b>Attribution</b>	<b>10xx</b> Special forestry site

### 7.5.2 Forest-genetic resources

<b>Geometry</b>	<b>Polygon</b>
<b>Contents</b>	Pointer

<b>Geometry</b>	<b>Polygon</b>
<b>Index</b>	Field name <b>ZG NR</b> , Field type <b>numeric</b> , Length <b>9</b> , Decimal places <b>0</b> <b>Example</b> Murau (61412), consecutive number <b>07</b> Data entry <b>614121107</b>
<b>Nomenclature</b>	<b>ZG_BEZNR_JAHR_POL.shp</b> <b>Example</b> ZG_61412_2019_POL.shp
<b>Attribution</b>	<b>11xx</b> Forest genetic resources
<b>Note</b>	Source: Federal Forest Office or provincial authority

### 7.5.3 Restricted extra-forestry area such as restricted hunting area, other restricted area

<b>Geometry</b>	<b>Polygon, point</b>
<b>Contents</b>	Pointer
<b>Index</b>	Field name <b>ZG NR</b> , Field type <b>numeric</b> , Length <b>9</b> , Decimal places <b>0</b> <b>Example</b> Murau (61412), consecutive number <b>08</b> Data entry <b>614122108</b> Data entry <b>614122208</b>
<b>Nomenclature</b>	<b>ZG_BEZNR_JAHR_POL.shp</b> <b>Example</b> ZG_61412_2019_POL.shp
<b>Attribution</b>	<b>21xx</b> : Restricted hunting area <b>22xx</b> : Other restricted area

## 7.6 Mandatory special map according to Article 32a Forest Act Pillar C 1

The special map of Pillar C 1 shall be set up nationwide in a uniform way. It **comprises all plan topics whose representation is mandatory according to Article 32 a Forest Act**. The cartographic design is part of the data processing of WEP-AUSTRIA-DIGITAL. The goal is, apart from a uniform representation on a federal scale, the best possible exploitability and evaluability of these four plan topics at district, provincial and federal levels.

The plan topics of the special map C 1 are made available by the Federal Forest Office (nationwide) or by the provincial authorities and are represented in the shape file **PT32a\_WEP\_JAHR\_POL.shp** with the following **attribution**:

- **04xx**: Forestry Natural Forest Reserves Federal Government
- **40xx**: Natura 2000 area
- **41xx**: National park
- **42xx**: Nature conservation area

### Note on the plan topic Natura 2000 areas:

Natura 2000 areas are protective areas defined by law, ordinance or decree according to Directive No 92/43/EEC on the conservation of natural habitats and of wild fauna and flora or of Directive No 79/409/EEC on the conservation of wild birds.

## 7.7 Optional special maps Pillar C 2

The special maps of Pillar 2 **can be established** by the author of the FDP **at his/her own discretion** thematically and cartographically and are not part of the data collection and data processing of WEP-AUSTRIA-DIGITAL.

For the type of representation of these plan topics, Pillar C 2, the previous procedure (FDP Ordinance 2021, Chapter 6 map representation) is recommended.

## 7.8 Administrative borders layer, forest layer

### 7.8.1 Administrative borders layer

In order to be able to carry out the border adjustment correctly and/or to merge all districts on a federal scale, it is mandatory to apply the **standardised GIS administrative borders layer of the Federal Office of Metrology and Surveying**.

The administrative layers of Austria are available for **download** at [www.bev.gv.at](http://www.bev.gv.at) or the **internet application WEP-AUSTRIA-DIGITAL**.

### 7.8.2 Forest layer

The Federal Research and Training Centre for Forests, Natural Hazards and Landscape Surveying (BFW) makes available to the Federal Ministry and/or the Federal Provinces a current forest layer. This layer has been established by means of remote sensing data and is being updated in planned intervals by the Federal Research and Training Centre for Forests, Natural Hazards and Landscape (BFW). This GIS dataset constitutes a current version of the “Austrian Forest” and has to be consulted by the Offices of the Federal Governments in case of Forest Development Plan revisions.

In those areas of the planning district where particularly great importance is attached to a **correct coordination of the borders of the functional areas with the forest layer and/or the actual forest borders in nature** (e.g. in under-forested areas, in settlement areas, in favoured areas for agricultural use, in areas with a high clearing pressure and where a particularly dynamic land-use development with effects on forest area exists), **special** attention has to be paid to their correct delimitation and representation.

The spatial data set Forest Layer Austria (Waldlayer Österreich) is available for download via the internet application WEP-AUSTRIA-DIGITAL.

# 8 Review and authorisation of the FDP

## 8.1 Review of the FDP draft

After the **review** of the draft by the Federal Ministry the review protocol is dealt with jointly with the authors of the plan (and the competent colleagues from the Federal Provinces) and the assessment and the delimitation of a representative number of functional areas is checked in the field for compliance with the Directive on the basis of **random samples** and/or striking changes of assessments of the FDP applicable so far.

The **result** of the review is also recorded in a protocol, which is enclosed to the approval file of the Federal Minister.

If the review results in the necessity of corrections or supplements, their implementation by the author of the plan is a prerequisite for the agreement to the partial plan.

Any changes of the plan resulting from the coordination with other agencies, after a pre-check has been carried out, shall be referred to separately at the final submission for approval.

However, the Federal Ministry reserves the right to demand the fulfilment of the requirement of changes or adaptations of the partial plan of the FDP submitted for approval. These requirements for changes shall be met by the Provincial Governor in order to ensure that the FDP can be approved.

In addition to the submission of the partial plan in analogue form, the digital data (GIS data, geometry and attributes of the functional areas) are, according to the standard agreed upon, checked and uploaded with WEP-AUSTRIA-DIGITAL. A check log of each upload is automatically sent to the plan author and to the Federal Research and Training Centre for Forests, Natural Hazards and Landscape (BFW).

The draft of the revised partial plan shall be submitted to the Federal Ministry of Agriculture, Regions and Tourism for revision 3 months prior to the expiry of the 10-years period. In case of exceedance of the revision interval, the FDP does **not** lose its validity.

Before the expiry of the 10-years revision interval the approval of the Federal Ministry to an adaptation of the Forest Development Plan has to be obtained, if fundamental changes in the

assessment of functional areas render this necessary (according to Article 6 para. 2 Forest Development Plan Ordinance).

Such changes shall be submitted to the Federal Ministry in writing with reasoning and sketch (section of the FDP). After approval, the applicable FDP partial plan shall be supplemented accordingly by an enclosure (text and map part).

## 8.2 FDP book binding and approval

After final (random sample) check by the Federal Ministry and the instigation of the binding the bound partial plan will be submitted to the Federal Minister on file for approval,

This will be made visible in the partial plan by means of a respective note (stamp, date of approval by the Federal Minister and signature of the expert with primary responsibility). Two bound copies of the partial plan will be returned to the Federal Governor. Further copies shall be produced in such numbers, as it seems to be necessary for the use at various provincial agencies. The costs of them are born by the Federal Province.

In order to ensure nationwide uniformity of the bound copies of the analogous FDP partial plans, it is necessary to use **medium green bookbinding linen with a lettering in golden letters**.

## 8.3 Inspection of the FDP

According to Article 9 para. 6 Forest Act the respective district administrative authorities shall make available the partial plan of the Forest Development Plan in their offices during office hours for public inspection and announce this in an appropriate way. Anyone is entitled to inspect the plan.

For the purposes of the technological development of the past few years, and the desired customer- and user-friendliness, the Forest Development Plans (including necessary or current evaluations) are also available digitally for public inspection and/or for download: [www.waldentwicklungsplan.at](http://www.waldentwicklungsplan.at).

One copy each of all analogous (bound) partial plans is available at the Federal Ministry for public inspection. For organisational reasons an appointment is necessary for the inspection.

# 9 Annex

## 9.1 Annex 1: Forest area planning in the Forest Act 1975

Section II of the Austrian Forest Act (Federal Act of 3 July 1975 by which forestry is regulated (Federal Law Gazette No 440/1975 as amended), standardises task, extent content and the instruments of forest land use planning as follows:

### Section II

#### Forest Area Planning

##### Article 6 Purpose of Forest Area Planning

Article 6 (1) The purpose of area planning for forest habitats (forest area planning) is the description and foresighted planning of forest conditions in the federal territory or in parts thereof.

(2) To fulfil the purpose indicated in paragraph (1), efforts should be taken for forests to be available to an extent and in such a quality that their effects, namely

a) the productive effect, i.e. in particular the economically sustained production of wood as a raw material,

b) the protective effect, i.e. in particular protecting against elementary risks and harmful environmental influences as well as maintaining the resistance of the soil against rainwash and drift, scree-formation and landslips,

c) the beneficial effect, i.e. the influence on the environment, especially on the balance of climate and water regime, on the purification and renewal of air and water,

d) the recreational effect, i.e. in particular the effect of forests as recreational areas on those visiting forests come into their own the best possible way, is safeguarded



(3) To achieve the objectives of forest area planning, special consideration shall be given to ensuring that

a) in areas with a concentration of residential and employment locations as well as of transport areas, the spatial organisation and structure of forests is of such a quality as to guarantee the protective, beneficial and recreational effects of the forest;

b) in areas where the protective and beneficial effects of the forest are of particular importance, for example as protection against floods, avalanches or wind or as a water storage facility, the spatial structure of the forest shall be appropriate to this significance.

(4) Efforts shall be made within the scope of forest area planning to co-ordinate all the public interests of relevance and of significance to it.

#### Article 7 Extent of Forest Area Planning

Article 7 Area planning for the habitat forest shall cover

a) the description and planning of forest areas

with a predominantly productive effect, with special consideration for forest areas suited for high production of raw materials,

with predominantly protective, beneficial or recreational effects, such as protection forests by official notice or protective forests, or forests protecting against air pollution including noise, and

recreational areas requiring special measures for air pollution control,

b) the description of

torrent and avalanche catchment areas, hazard zones subject to torrents and avalanches, and forests with special habitats according to Article 32 a

c) the planning of

reforestation on areas, for which this is required as well as afforestation for the

purpose of protection against wind, landscape design and improvement of the water regime, especially in under-forested areas,

separation of forestry, agriculture and alpine farming, where this is advantageous for a better development of the forest effects, for example in the timberline region of forests.

## **Article 8 Forest Area Plans**

Article 8 (1) In the forest area plans the facts and identifiable developments determining and influencing the forest conditions of the plan area shall, in consideration of the provisions of Articles 6 and 7,

- a) be presented in cartographic and textual form (development of the plan) and
- b) these presentations have to be adjusted to the actual development in the plan area.

(2) Forest Area Plans include

- a) the Forest Development Plan (Article 9),
- b) the Technical Forestry Plan (Article 10),
- c) the Hazard Zone Plan (Article 11).

(3) Detailed provisions on the contents as well as on the form and structure of the forest area plans shall be issued by way of Ordinance of the Federal Minister of Agriculture, Forestry, Environment and Water Management.

## Article 9 Forest Development Plan

Article 9 (1) The Forest Development Plan covers the federal territory (overall plan) and is made up of partial plans.

(2) The Governor of a Federal Province shall draft the relevant partial plan. The plan shall extend over the area of a Province or parts thereof. Only forest managers [“Forstwirte” according to Article 105 para. 1(3)] are authorised to prepare these partial forestry plans.

(3) Should total planning, in order to be sensibly carried out, require that a partial plan is continued in a partial plan of the neighbouring Federal Province, or should an existing partial plan be continued in the neighbouring Federal Province for the same reason, the Federal Minister of Agriculture, Forestry, Environment and Water Management shall be responsible for ensuring that these partial plans have the necessary uniform structure.

(4) The partial plan should set out the effects of the forest, especially in consideration of its significance for the general public, in accordance with Articles 6 to 8. The plan shall be subdivided into a textual part (description) and a cartographic part (representation).

(5) The Provincial Governor shall verify, upon application, the admissibility and expedience of a Technical Forestry Plan in accordance with the provisions of this section and, provided that the result of the verification does not give rise to concern,

- a) include it in the partial plan or, should such a plan not exist,
- b) make it applicable as a partial plan to the district in question.

(6) The partial plan and its adjustments to the respective actual status of development require the consent of the Federal Minister of Agriculture, Forestry, Environment and Water Management. This consent shall be granted if the plan meets the provisions of this section and takes account of existing partial plans of neighbouring Federal Provinces. Before obtaining consent, the Federal Provincial Governor shall obtain a statement from the Federal Province from the point of view of area planning of the Federal Province. Once the consent of the Federal Minister of Agriculture, Forestry, Environment and Water Management has been obtained, the

Provincial Governor shall bring the plan to the attention of the relevant district administration authorities. The latter shall display the plan in their offices for general inspection during office hours and shall give notice of this in a suitable fashion. Everyone is entitled to inspect the plan.

## **9.2 Annex 2: Ordinance on the Forest Development Plan ("Waldentwicklungsplan Verordnung", abbr. "FDP Ordinance")**

Ordinance of the Federal Minister of Agriculture and Forestry of 18 November 1977 on the Forest Development Plan original version: Federal Law Gazette No 582/1977

According to Articles 8, 9 and 24 of the Forest Act 1975, Federal Law Gazette I No 440 it shall be established by way of Ordinance:

Article 1 (1) The Forest Development Plan (Article 9 of the Forest Act 1975) shall contain the representation and the foresighted planning of the forest conditions and shall be established in a way taking into consideration all public interests relevant for forest area planning.

(2) The Forest Development Plan covers the whole federal territory (overall plan) and is made up of partial plans.

(3) The Forest Development Plan is in particular the basis for the

a) planning and implementation of measures of the bodies of the authority charched with the implementation of the Forest Act 1975 and

a) a decision-making aid for the expert activities of the bodies of the forest-technical service of the authority.

(4) Without prejudice to the provision of para. 3 the Forest Development Plan shall be established, depending on the possibilities offered, in such a way that you can gather from it also indications for extra-forestry planning.

Article 2. Subject matter of presentation and planning in the partial plan are

b) The forest areas and their effects (functions) including the upper timberline zone of the forest and the shelterbelts.

c) Basal areas whose afforestation can contribute to the effects of forests.

d) Areas, where the separation of forestry, agriculture and alpine farming is advantageous for a better development of the forest effects, and

e) other forest-relevant facts (such as stress, resilience and damage).

Article 3 (1) The partial plan shall extend over at least one planning unit; it can also cover the sum of several planning units, but not more than a Federal Province.

(2) The planning unit is the locality of a political district or a district forest inspectorate (forest district).

Article 4 (1) The partial plan shall consist of a cartographic and a textual part.

(2) The cartographic part shall contain the forest function map. In this part, the functions of the forest areas (functional areas) shall be made evident, emphasising the key function.

(3) The cartographic part shall also contain additional maps, if they are required for the representation of the forest area structure or for the planning and representation of the afforestation or the structure of forest and pasture. It can also contain special maps with other forest-relevant facts (Article 2 lit. D).

(4) For the preparation of the forest function map the Austria map in the scale 1:50,000 (ÖK50) shall be used.

(5) For the preparation of additional maps cartographic documents in a scale between 1:1,000 and 1:50,000 shall be used.

(6) Special maps can also show other scales than those mentioned in para. 4 and 5.

(7) The textual part shall contain:

a) the description of the planning foundations,

- b) the description and the reason of the key function of the individual functional areas as well as, if required, indications of other functions,
- c) indications of functional impairments
- d) indications of individual forestry planning and forest policy measures for the purposes of Article 1, para. 3, lit. a, and
- e) if required, planning according to Article 7 lit. c and Article 24 of the Forest Act.

Article 5 (1) A functional area is the spatial unit of forest areas, within which each individual function is assigned a uniform value. Functional areas have to be represented if they have a minimum size of 10 ha. Smaller areas, which are of particular importance, can be displayed using symbols.

(2) For each functional area, the four forest functions (Article 6 para. 1 lit. a to d of the Forest Act 1975) have to be evaluated, one of them has to be defined as the key function. The key function shall be the one that is of primary public interest.

(3) For the assessment of the protective, beneficial and recreational functions the criteria contained in Article 1 para. 1 lit. b, c and d of the Forest Act 1975 shall be applied. The value shall be expressed by a value indicator. Accordingly, the following value indicators signify the following value:

Value indicator	value
0 .....	none
1 .....	low
2 .....	medium
3 .....	high

(4) For every functional area a key figure shall be indicated which is composed of the value indicators of the individual functions in the order protective, beneficial and recreational function.

- (5) Being the prerequisite for fulfilling and ensuring the protective, the beneficial and the recreational functions, the productive function is not subject to multi-level evaluation and has to be determined as key function if neither the protective nor the beneficial nor the recreational function is of high value (value indicator 3).
- (6) The protective function, the beneficial function or the recreational function are to be determined as the key function, if this function is of high value (value indicator 3).
- (7) If more than one of the functions mentioned in para. 6 are assigned a high value the following order applies to the determination of the key function: Protective function, beneficial function, recreational function.
- (8) In the Forest Function Map the key function shall be visualised by colour within the functional area. Accordingly the following colours signify the following functions:

Colour	key function
Green .....	productive function
Red .....	protective function
Blue .....	beneficial function
Yellow .....	recreational function

Article 6 (1) When preparing the partial plan, the respective state of scientific knowledge and the experience shall be taken into consideration accordingly.

(2) In case of changes in the foundations or in their assessment, the partial plan shall be adapted to these changed conditions. For such adaptations the consent of the Federal Minister of Agriculture and Forestry has to be obtained.

Article 7 Until the completion of a partial plan also other local areas deviating from Article 3, para. 2, complying with the purpose of planning, may be used as a planning unit for plans according to Article 24, para. 1 of the Forest Act 1975.

Article 8 (1) The present Ordinance shall enter into force on 1 January 1978.



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**Federal Ministry of Agriculture, Forestry, Regions and Water Management**

Stubenring 1, 1010 Vienna

[bml.gv.at](http://bml.gv.at)