קרן קימת לישראל
K K L - J N F

Forest Management Policy of Israel

Guidelines for Planning and Management

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Summary

In light of the directives contained within NOP 22 - National Master Plan 22 for Forests and Afforestation - the KKL-JNF (Israel's forestry service) decided to write an updated policy document on forest management in Israel. This document was prepared with a deep respect and appreciation for Israel's afforestation enterprise over the years - an enterprise marked by its pioneering spirit and achievements as well as its uniqueness; a program conceived of under difficult conditions paralleling those that the emergent State of Israel faced since its inception. Israel's afforestation program has given the public a valuable asset. With this in mind, the new forest management policy (FMP) recognizes the need to implement changes in current approaches and concepts towards forest management and design according to the latest developments in forestry, ecology, social and economic sciences. This FMP furnishes an obligating professional basis for managing Israel's forests in a goal-oriented and sustainable fashion. This document defines and outlines the forestry goals in Israel, the various forest types found here, and the planning and management principles to be employed in them.

Forestry goals

The primary goal of forestry in Israel is to provide a variety of ecosystem services to its citizens, recognizing that human existence and wellbeing are dependent upon biological diversity and those services provided by ecological systems. Subsidiary goals contained within this statement are as follows:

1. Provision of recreational and outdoor activity services
2. Landscape design and diversification
3. Provision of supporting and regulatory services (i.e. carbon sequestration, primary productivity)
4. Supporting Israel's unique biological diversity
5. Provision of soil and water conservation services (preventing soil erosion, increasing water infiltration)
6. Provision of a variety of economic benefits to society (wood products, pasture, tourism)
7. Protection of open landscape
8. Protection of Israel's native tree species and reintroduction of native trees to the landscape
9. Protection and restoration of natural heritage landscapes
10. Ecological restoration of damaged sites and ecosystems
11. Creation of buffer zones around communities to mitigate the effects of environmental hazards such as noise, air pollution, visual blemishes to the landscape, and to protect against wildfires
12. Strengthening the public's identification with the forest and nature, and educating them to protect it

Principles of Forest Management in Israel

Forest planning, management and program implementation will be undertaken according to the following ten principles:

1. **Goal-oriented, Adaptive Management:** the planning and execution of management operations according to a pre-determined set of management goals
2. **Multiple-Use:** managing the forest to attain a diverse set of ecological, social and economic goals
3. **Habitat Suitability:** determination of forest management goals, forest structure and species composition as a function of specific habitat conditions and location within surrounding landscapes and ecosystems
4. **Natural Processes:** reliance upon local species and natural processes as much as possible
5. **Minimal Intervention:** the attainment of management goals through the lowest possible level of outside intervention
6. **Vitality, Tolerance and Stability:** shaping and managing forests to become vital and healthy systems able to withstand stresses and unexpected hazards
7. **Diversity, Complexity and Patchiness:** preservation and encouragement of a variety of landscape types, habitats, vegetation types, species and genotypes
8. **Continuity:** managing the forest as an interconnected landscape element within its surroundings over time, and the maintenance of continuous vegetative cover
9. **Protection and Stewardship of Natural Heritage assets**
10. **Environmental Protection:** minimizing the environmental impacts of forest establishment and management activities as much as possible

Forest Planning and Management

Long-term planning is an essential process for the attainment of forestry goals through sustainable forest management. This planning process is based on the division of forestlands into area units according to their designated land-use (land-use unit). In each unit the desired vegetation type is than defined according to its land-use designation, existing vegetation type, projected vegetation dynamics and specific habitat and environmental conditions. Forest planning and management will be fully coordinated with approved statutory plans at the national level (especially NOP 22), the regional level, the local level (detailed forest plans) and any other relevant plans. The degree of detail to be found in the forest land-use and management plan will be more comprehensive than that which exists in the statutory plans; this level being necessary to manage the forests adequately and according the limitations defined by statutory plans.

The primary forest land-use designations are:

1. **Multiple-Use Forest:** These forestlands are designated to preserve continuous open landscape; express the landscape diversity of Israel; and provide a broad range of ecosystem services. The majority of Israel's forestlands will be thus characterized. Management of these lands will be of an *extensive* nature, based primarily on natural regeneration, succession and adaptation. The multiple-use forests will be multi-aged, structurally complex and patchy, and will maintain a variety of vegetation types.
2. **Recreation:** These forestlands are designated for recreational activities and outdoor experiences.
3. **Heritage assets and unique Landscape types:** These forestlands are designated for the preservation and enhancement of heritage and landscapes assets of high cultural value.
4. **Fuel breaks:** These forestlands are managed to deter and/or stop the advance of forest fires across the landscape.
5. **Natural assets and unique habitat types:** These forestlands are designated for the preservation and enhancement of natural assets of high ecological importance such as unique or endangered habitats, communities or species.
6. **Community Forest:** These forestlands are located next to an existing community and primarily used by its local populace.
7. **Research:** These forestlands are designated for research purposes to advance forest management techniques.

Four types of forest management plans have been designated to optimize the management process. Each type varies according to its resolution and time scale:

1. **Master Plan:** deals with an individual forest or group of adjacent forests, according to NOP 22 guidelines. The forest master plan defines the chief management goals of the general forestland. The plan subdivides the landscape unit into smaller parcels; each one is further defined for its designated land-use and desired vegetation type. This plan is valid for 25 years.
2. **Multi-Year Work Plan:** presents a long-term work program to attain the goals contained within the master plan. This plan is valid for 10 years.
3. **Annual Work Plan:** presents comprehensive working plans based on those detailed in the multi-year work plan. The plan pertains only to those areas assigned for treatment in the designated year.
4. **Detailed Operations Plan:** describes the operation of management tools in each specific site designated for treatment in the annual work plan.

Employment of Management Tools

Numerous management tools are available for attaining the desired aims and goals of a forest, as outlined in the forest planning process. The main goal of forest management operations is to direct natural processes occurring within the forest ecosystem towards the realization of planning objectives. In general, the majority of management activities will be applied to planted forests requiring intervention in order to achieve the desired goals and vegetation structure. Other vegetation types within the forestlands which are not planted (woodland, shrub lands, dwarf shrub land, etc.) will be managed at a lower level of intervention, with the main goals of protecting them and directing their utilization in such a way as not to degrade their integrity. Similarly, the management of planted forests strives to create a sustainable forest ecosystem that will require less intensive and more self-sustaining forms of management over time.

This section presents the principal set of tools available to the forester, including planting, thinning and pruning; agro-technical techniques including mowing, plowing weed control; as well as grazing and prescribed burning. Each tool is described in its own sub-section as listed below:

1. **Goals:** a list of goals that can be achieved by using the specific tool
2. **Considerations:** list of conditions and limitations to take into account before using the specific tool
3. **Principles:** list of guiding principles to use when employing the specific tool
4. **Planning:** list of topics to take into account when preparing a work plan

The Implementation Process

Implementing the FMP is a complex venture requiring a long-term commitment of effort and resources. The process will proceed by stages and will include training sessions for those directly involved in implementation, alongside the development and assimilation of essential tools, such as the use of templates for the design of planning and monitoring activities, as well as assigning detailed management instructions for specific goals. The FMP will be periodically updated according to advances in knowledge and data generated from monitoring and research programs. The implementation process is vital in providing professional and integrated support to management personnel.