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Forest dieback due to climate crisis and excessive game populations:

An appeal to the future government to regulate hunting

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Fondation Hëllef fir d'Natur - FSC - Lëtzebuerger Privatbësch - Mouvement écologique - natur&emwelt asbl - PEFC - Prosilva - Wiltzer Waldverein

United in our commitment to the forest of today and tomorrow

The forest is dying!
The big challenge: preserving the forest in times of climate change

Our forests are under extreme stress. In Germany, it is assumed that in the coming years 50% of the current forest areas will die off in the coming years.

In Luxembourg, the situation is similarly alarming. According to the current forest condition inventory1 for Luxembourg, 85.5% of native trees are damaged, severely damaged or dying, i.e. only 14.5% of trees are still healthy.

Die Gründe für die heutige Situation sind hinlänglich bekannt:

Forest dieback as a direct consequence of global warming and droughts in the wake of the climate catastrophe

The climate catastrophe has long since reached us. The forest is particularly affected. This fact is perhaps less easily visible to the layman than „melting ice“, but no less dramatic.

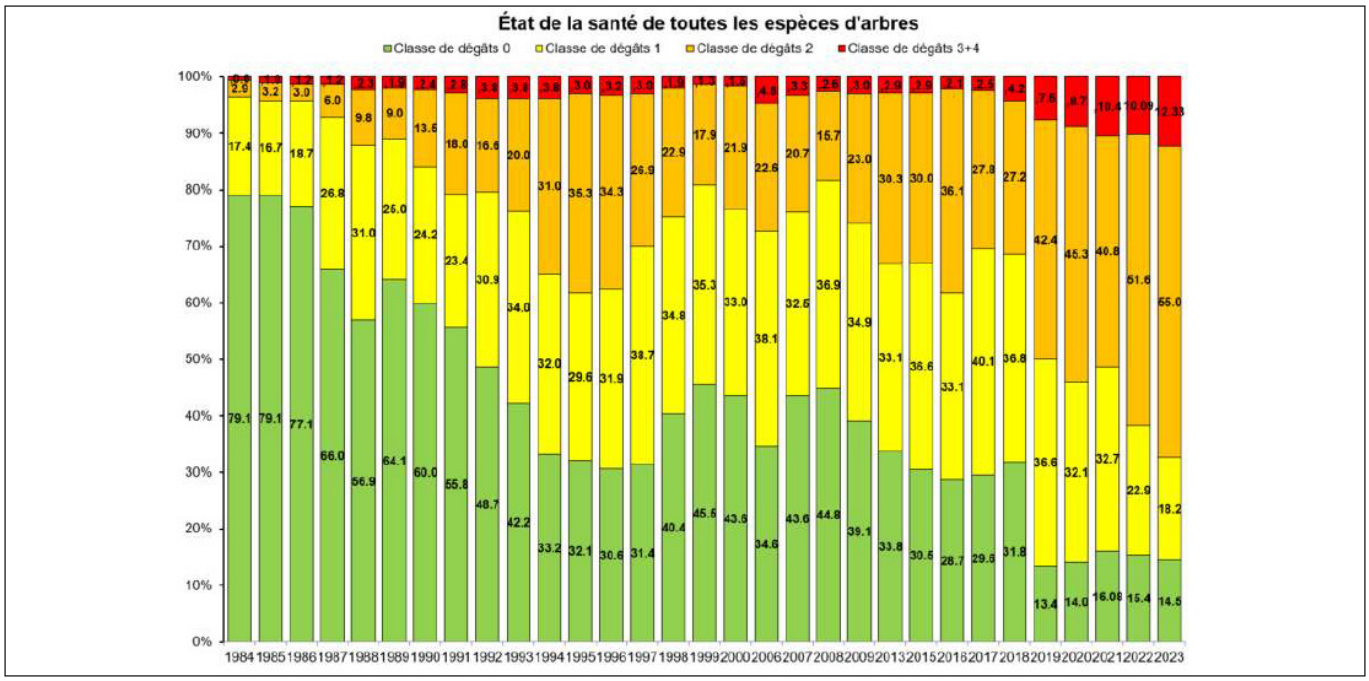
The effects of global warming can be seen in the forest in the form of premature leaf discolouration and shedding, dying branches in the treetops and holes in the canopy of closed forest stands due to dying trees. The drought of recent years is leading to a further massive acceleration of forest dieback (see graphic).

According to an analysis by the Lëtzebuerger Privatbësch, it can be assumed that in the next ten years around one third of today‘s forests will die off. of today‘s forests will die off in the next ten years. This raises the question of how to react to this situation and how these forest areas can be rebuilt.

The Luxembourg environmental organisations Mouvement Ecologique and natur&ëmwelt as well as PROSILVA tend to rely more on natural regeneration and supplement this and to supplement this by planting the rare, adapted native tree species whose seed trees are currently lacking.

The Lëtzebuerger Privatbësch and the Wiltzer Waldverein also advise their members to prioritise natural regeneration and to supplement it with rarer, climate-resistant native tree species if possible. If natural regeneration is not possible (e.g. in the case of spruce clear-cuts), initial planting with tree species adapted to the climate is recommended. Non-native tree species should only be introduced in a mixture.

Natural regeneration is so important because it is the only way to preserve the genetic diversity of our forests and utilise the genetically anchored, millennia-old adap-



Condition of tree species in Luxembourg‘s forests (Forest Condition Report 2023: in green still healthy trees) (1)

[1] ANF (2023). Les résultats de l’inventaire phytosanitaire 2023 des forêts du Luxembourg. Luxembourg 4 septembre 2023. https://gouvernement.lu/dam-assets/documents/actualites/2023/09-septembre/27-welfring-inventaire-phytosanitaire/rsultats-inventaire-phytosanitaire-forts-2023-version-anf-plus-dtaille.pdf

tation to the specific location. This natural selection is further strengthened when particularly old seed trees, which have themselves experienced many climatic extremes over decades and centuries, are present in the stand.

The expectation is that some emerging trees will be better adapted to the drought in the specific location. In addition, young trees that have not been transplanted can develop a stronger root system in relation to their crown and can therefore draw more water and thus draw more water from the soil when there is less moisture.

However, this presupposes that the forest can also rejuvenate or that the new plantings can grow. And this is precisely where the problem lies: the high density of hoofed game.

Forest dieback combined with a lack of natural regeneration

The big problem lies in the fact that the high game densities only allow very limited natural regeneration, which is so urgently needed and indispensable, and actually prevent it.

As mentioned above, the density of game in Luxembourg's forests is is far too high. This is due to several factors. Mild winters as a result of climate change, population-building hunting and hunting and gamekeeping practices[2] and the high availability of forage in agricultural areas have caused the hoofed game population to explode.

Roe deer, stags and the deer released at various locations and non-native fallow deer and mouflon eat the buds especially the buds of the young, regrowing trees trees, which leads to their death. In other words: natural regeneration is prevented. In addition, hoofed game selectively eat different species, the young plants of sessile oaks and rare tree species, such as the wild service tree are clearly favoured. The consequence is that only beech and spruce remain for natural regeneration. remain for natural regeneration. However, it is precisely these tree species that are demonstrably the least able to adapt to climate change. In this respect: a fatal vicious circle.

The numerous wild boars, for their part, love acorns and beechnuts, so that the reproduction of trees in this way can only

The absence of any young oaks outside the enclosure shows the high game population. How much is due to the feeding pressure of the wild boar on the acorns or the deer on the young oaks cannot be recognised here. Close-up inside (left) and outside (right) of the forest gate

The rough leaves of the forest riding grass are scorned by deer and roe deer, so that this species is particularly prevalent on the clayey Keuper soils and the dense root system jeopardises later natural regeneration (Waldreitgras, 2019)

Massive damage caused by red deer to Douglas fir (Rouscht 2019)

[2] *The term "population-building hunting" refers to a hunting practice in which the female animals are excessively spared, which leads to an increase in the population. This practice is mainly carried out in red deer hunting grounds in order to be able to shoot a larger number of male animals (trophy animals).*

Damage to Scots pine caused by roe deer

Territory marking by stag (bull)

Even “protected” new plantings, such as the wild cherries shown here, are “nipped” by red deer and die off

Peeling damage to ash trees by red deer (Rouscht 2018)

take place to a very limited extent due to excessive wild boar populations.

To summarise: too much game eats precisely those young trees or acorns and beechnuts that should should urgently replace older dying stands.

Along with the forests, the ecosystem services that are essential for us (groundwater protection, biodiversity, carbon storage, climate protection, air filter and humidifier, erosion protection, recreational space, timber production, ...) are also at risk. endangered; in addition to the rapid change in our climate, to a large extent by game populations.

In addition, the high population is also a problem from an animal welfare perspective: the low wear and tear of the hooves with painful joint deformations of the rock-dwelling mouflon (native to Corsica), the high infestation rate with bovine tuberculosis in red deer populations and, more recently, the outbreak of diseases such as African swine fever are just a few examples.

A targeted reduction in cloven-hoofed game populations is therefore urgently needed for reasons of nature conservation, environmental and climate protection and animal welfare in order to preserve natural regeneration and new plantings and thus the future of our forests.

More consistent and, as far as possible animal-friendly hunting: a must for the preservation our forests

The climate catastrophe must continue to be combated. However, the proposals set out below are absolutely essential in order to initiate an appropriate climate adaptation strategy for our forests and prevent the worst from happening.

Hervorgehoben werden soll, dass Bäume und ein naturnaher resilienter Wald äußerst wichtige Verbündete im Kampf gegen den Klimawandel sind. Sie sind, neben allen anderen Funktionen, eminent wichtige CO2-Speicher. Wälder sind aktive Rohstoffproduzenten, welche neben ihrer Funktion als CO2-Speicher die Fähigkeit haben Baustoff zu liefern, der andere CO2-intensive Materialien wie z.B. Beton ersetzen kann.

Value-oriented silviculture and intelligent wood utilisation are applied nature and climate protection!

It is therefore all the more important that the central measure, which is of crucial importance for the protection of forests, is now finally being actively tackled: the reduction of game populations.

Consensus among all stakeholders: there is no way around reducing the high populations of cloven-hoofed game through more consistent hunting

In view of the above arguments, there is a broad consensus on the importance of hunting for the conservation of forests between nature conservation organisations, representatives of the nature and forest administration, agriculture and, above all, forest owners in both state bodies (Conseil Supérieur de la Chasse (CSC) and Conseil Supérieur de Protection de la Nature (CSPN)). The high game populations are also a recurring topic of discussion at the meetings of the Conseil Supérieur de Protection de la Nature (CSPN) when drawing up the „ Plans de gestion „ for the Natura 2000 habitats.

The central question is: **How much game can the forest tolerate?**

Action must be taken today so that there will still be such a forest tomorrow!

Excursus: A reduction in hoofed game populations as a prerequisite for publicly accessible forests

The fact is that if no regulating hunting were to take place, other means would have to be used to enable regeneration.

An analysis by the Lëtzebuerger Privatbësch has shown that the funding requirement over the next ten years will be around 250 million euros for planting, ground preparation, follow-up maintenance and replanting and **500 million euros** for browsing protection measures for both natural regeneration and planting.

If the game population is not reduced, more than **10,000 kilometres of game protection fences and several million individual tree protectors**, often made of plastic such as PE or PP, would have to be erected in the coming years in order to reasonably guarantee the growth of a species-rich, resilient natural forest.

10,000 kilometres of fencing would mean additional fragmentation of Luxembourg's habitats with what is already the densest transport infrastructure in Europe. This **additional fragmentation** would not only extremely reduce the recreational function of our forests (who wants to walk permanently along inaccessible tree cages?), but would also prevent the migration of animals and at the same time increase their direct impact on the non-fenced forest areas.

It seems clear that these 500 million euros, which are solely due to the **excessively high populations of cloven-hoofed game, cannot simply be passed on to the public purse** and that this situation must therefore be avoided for the reasons stated.

Instead of using public money to pay for expensive game protection fences, which also require a high level of maintenance, the only financially sensible, animal welfare-compliant and ecological measure is to reduce the hoofed game population by increasing hunting activities in order to allow our forests to regenerate.

Can you imagine that in the future, 10,000 kilometres of wildlife protection will have to be built with 500 million in public money so that there will still be forests tomorrow? That the forest is no longer accessible to the public? That artificial barriers would be built for animals? Probably not... Numerous measures need to be taken to ensure that natural regeneration like this can succeed: The prerequisite However, it is also essential that the damage is correctly recognised and assessed and that concrete and correct action can then be taken.

Political demands for a future coalition agreement

Nothing less than the future of the forest in Luxembourg is at stake: this is a political responsibility that the next government must face up to.

Set up crisis summit

The undersigned organisations call on politicians to hold a crisis summit with the participation of private forest owners, public forest owners, environmental organisations, foresters, representatives of hunters and hunting syndicates as well as PROSILVA in order to address the points listed below. Farmers‘ representatives should also be invited.

Creating acceptance for regulating hunting

The public must be informed about the importance of hunting on the basis of **professional criteria**. Among other things, the following information and correlations should be communicated:

- The natural „enemies“ of today‘s hoofed game, so-called „super predators“, such as the wolf, no longer exist (or rather have not yet returned ...), so that this natural regulation cannot currently take place;
- With **warmer and milder winters**, the „natural“ selection of weakened animals etc. is also largely absent;
- Due to these two factors, among others, the density of game is increasing considerably. This is because there is also **no regulation by the food supply.** The fatal situation here is that roe deer and red deer eat away young trees, so that hardly any trees grow back and the game can destroy its own habitat in the medium term;
- The influence of hoofed game on natural regeneration can be demonstrated for everyone by means of so-called „**Weisergatter**“ (i.e. fencing around limited forest plots (6 x 6 metres), where it is possible to see how the forest develops without browsing by game) and thus the importance of hunting for a near-natural, resilient mixed forest can be actively communicated to the population.

These facts should also be communicated using the scientific instruments mentioned below.

The pressure of cloven-hoofed game on natural regeneration can be visualised by means of a game fence (game fence in a common oak-hornbeam stand, Friemholz near Echternach, 2019)

Scientifically measure and assess game damage

Truly efficient regulation of game populations requires that game damage is scientifically measured and assessed. The expertise of a wildlife biologist, for example, could help here. In fact, the recording of agricultural damage has been well established for decades, but this is not the case in Luxembourg when it comes to assessing forest damage. The methodology is scientifically proven and standard abroad, it just needs to be politically desired and implemented. This is currently only the case to a limited extent in Luxembourg.

The demonstrability of the necessity of a measure is also a prerequisite for creating acceptance. Hunting and the corresponding shooting quotas must be subordinate to the preservation of species-rich and resilient forests and the shooting quotas for hoofed game must be adjusted accordingly on the basis of browsing reports. Examples from abroad show how modified hunting methods lead to significantly higher hunting distances and reduced forest damage.

Numerous measures must be taken to ensure that a natural rejuvenation programme like this can succeed: However, it is also essential that the damage is correctly recognised and assessed and that concrete action is taken in response, e.g. with increased hunting pressure

Accordingly, the following measures should be taken:

- The current wildlife density should be measured using scientific methodology against the success of mixed regeneration (of natural origin or with supplementary planting) in which sessile oak and rare site-appropriate tree species such as wild service tree, wild cherry, maples etc. occur in significant numbers without costly protective measures;
- **A nationwide scientific survey of browsing damage and game pressure using game fences and control areas** should be carried out in order to be able to correctly assess game density. There are already some game fences, but too few; significantly more are needed to reliably control game pressure;
- The **findings from the expert report on the assessment of game damage**, which was completed in 2022 on behalf of the Nature and Forestry Agency (ANF), should be translated into concrete recommendations for action;
- **Wildlife biologists should be employed** by the Nature and Forest Administration and the Lëtzebuerger Privatbësch so that they can record browsing pressure and **damage assessment** at the request of district foresters or private forest owners (see measures PNPN3). One of the tasks of these wildlife biologists should be to record the degree of game browsing and derive the damage caused to the forest from this;
- Similar to the current recording and compensation payments in the agricultural sector, compensation should also be paid for damage caused by game in the forest. The aim is to create a certain amount of financial pressure for the hunting tenant to keep the game population within a framework that allows for natural regeneration;

- In addition, by analogy with the procedure in fields and meadows, it should be made easier for forest owners to request a damage settlement, e.g. via prefabricated notification forms via the „guichet unique“.
- The damage to the forest caused by the excessive density of game should be claimed from the hunting tenants in the public forest (by the municipalities and the state).

Record game densities and set reduction targets

To date, the current game shooting plans set by the Commissions cynégétiques for each hunting ground are mainly based on the shooting figures from previous years. This does not take into account the real game pressure based on the game browsing of natural regeneration and new plantings: In other words: if too few animals were shot in previous years, too few will continue to be shot.... The shooting figures are in no way based on professional reality. However, the central prerequisite for achieving a game density that allows natural forest regeneration is logically the knowledge of how much game needs to be shot to achieve this.

- The ANF should draw up annual, technically based minimum shooting figures. should be drawn up annually. In the short term, foreign experts should be utilised to support the ANF and the Commissions cynégétiques régionales (C.C.R.) in the most urgent and known problem areas in drawing up these minimum shooting plans;
- The prerequisite for being able to shoot more game in real terms is also to extend the **hunting times at dawn and dusk and to allow modern methods for recording game (thermal imaging and IR techniques).** (thermal imaging and IR techniques). Amendments to the Hunting Act are required here;
- In addition, **population-boosting hunting**, i.e. a targeted increase in the deer population, especially of red deer, must be **specifically prevented**; for example, shooting tags for males should only be allocated after proof of adult hinds having been shot; shooting tags for the shooting of deer calves should be unlimited;
- The requirement to shoot all mouflon and fallow deer should be maintained as before. The „chasse administrative“ instrument should also be utilised in this context.

Necessary structural / legal changes to hunting practice

It is obvious that the undersigned are convinced that the problem of the currently endangered regeneration and renewal of the forest in the coming years can only be solved in cooperation with hunters. The undersigned are in favour of responsible hunting that also reduces the stress on animals during hunting as far as possible.

This requires a reform of the hunting law. Work must begin immediately on its drafting must begin immediately. This must be done in co-operation with all stakeholders. The following amendments are urgently needed:

- If the leaseholder repeatedly fails to fulfil the shooting plans for the game species game species, it must be possible to terminate the lease of the hunting lot. contract of the hunting lot. Alternatively, a hunting lot could only ever be leased for a significantly shorter period of time and only be renewed if the hunting objectives are achieved;
- A far-reaching **reform in the allocation of hunting lots** is necessary: the composition of the hunting syndicates and the Commission cynégétique (C.R.R.) must be reformed. The members must no longer be exclusively hunters must no longer be the only members, but public and private forest owners must be proportionally represented. This is all the more important in order to safeguard the interests of forest regeneration;
- Hunting lots should be managed by the municipalities or hunting syndicates with the help of **specially appointed foresters** in order to enable the local population to hunt. In this way, younger hunters could possibly be won over to the activity;

- **An association of forest owners** with a contiguous property size of more than 50 hectares, who are in possession of a hunting licence, should be able **to hunt their own areas**, which is currently not the case, as the areas must be leased in a procedure in accordance with the law;
- It should be possible to introduce a hunting licence system for the state, municipalities, hunting syndicates and forest owners with a contiguous forest area of > 50 ha.
- The **quantitative recording of browsing damage should become part of hunting training and hunter examinations**. Hunters should also be obliged to take part in regular training courses/workshops, in which the topic of adapting forests to climate change is dealt with in particular.

Valorisation and utilisation of game meat

For understandable reasons, there is also an urgent need to market more local game meat. The fact is that game meat is recommended from both an animal welfare and a health perspective. This is because wild animals in particular have a stress-free life, their meat is of high quality and from a climate protection perspective it offers considerable advantages over farmed animal meat, etc.

Unfortunately, game shot in Luxembourg is currently only utilised to a limited extent. The marketing channels are unfortunately underdeveloped, so that restaurants, for example, often offer imported game meat from game farms.

- It is imperative to strengthen marketing chains for local game meat and, if possible, to enforce and consistently advertise the certification of local game meat. Although game meat is often on the menu in restaurants, it is unfortunately not clear where this game comes from. Sadly, it often comes from game farms in eastern countries and not from local forests. Accordingly, a series of reforms should be initiated here.