



**GOVERNMENT OF KHYBER PAKHTUNKHWA
FORESTRY, ENVIRONMENT & WILDLIFE DEPARTMENT**

Report on Forest Fire from 23-05-2022 till 09-06-2022

The following report is based on Daily Situation Reports generated by Forest and Wildlife Department since 23-05-2022 till 09-06-2022 with the following indications (two sample DSRs are added as **Flag-A**): -

1. Name of Forest Division [this covers wildlife protected area also]
2. Location
3. GPS Coordinates
4. Type of Fire (Ground, Surface or Crown)
5. Category of Land (Resume / Protected Forest or Guzara or Communal or pasture)
6. Type of vegetation (grasses / natural vegetation or shrubs or trees)
7. Approximate area under fire
8. Status (controlled or %age controlled)
9. Actions taken
10. Nature and extent of damage
11. Probable cause of fire
12. Legal action taken
13. Rehabilitation plan (if any)

2. Data Analyses (DSRs 23.5.2022 – 09.06.2022)

1. Fire Incidents - Type of Fire (Numbers reported - 210)

Ground ¹	Surface ²	Crown ³
189	12	9
90%	6%	4%

2. Fire incidents - Category of Land (Numbers reported - 197)

Reserved ⁴	Protected	Guzara ⁵	Communal ⁶	Private
20	33	9	26	109
10.2%	16.8%	4.5%	13.2%	55.3%

¹ Ground Fire: Burning of thick layer of humus, needles and debris in the Forest, where the flame is not visible

² Surface Fire: Accelerated Burning of Grasses, bushes with flame and fast spreading, but does not reach the tree canopy.

³ Crown Fire: Fire which engulfs all vegetation including tree canopy with high intensity and flame, spread from canopy to canopy, causes complete destruction of Forest cove

⁴ Reserved/ Protected forest is where land and trees both are owned by Government

⁵ Guzara forests is where land and trees are owned by private individuals but trees are managed by Forest Department

⁶ Communal land is land owned by the community but can be wooded area or grasses or agriculture land or any other purpose

3. Fire Incidents - Type of Vegetation (Numbers reported - 206)

Open wooded area	Grasses/ Shrubs	Scrub	Natural Vegetation	Natural Regeneration	Others
105	55	5	4	25	12
51%	26.7%	2.4%	1.9%	12.2%	5.8%

4. Approximate area (Acres) under fire by category of land (14430)

Reserved	Protected	Guzara	Communal	Private
2398.93	1179.35	387.5	5433.31	5040.37
16%	8%	3%	38%	35%

5. Type of vegetation where fire reported (14,430 Acre)

Wooded area	Grasses/ Shrubs	Scrub	Natural Vegetation	Natural Regeneration	Others
9617.225	3024.79	19.76	12.03	1650.38	106.77
66.6%	21%	0.12%	0.08%	11.5%	0.7%

Details of damage (Designated forests including Reserved, Protected & Guzara)

Region	FIRs	Known offenders	Unknown offenders	Damage reports	Offenders in damage reports	Trees damaged ⁷
CCF-I	8	0	0	1	0	0
CCF-II	12	0	20	0	0	0
CCF-III	7	14	0	24	30	2

6. Probable Cause of Fire (Reported- 210)

Human Action ⁸	Unknown	Natural Causes ⁹
55	143	12
26.2%	68.1%	5.7%

3. The above data shows that near majority of fires are ground fires, in dry grasses, with 68% in communal and private lands and with over 73% of the affected area also either communal or private land.

4. A complete report on administrative measures adopted by Forest & Wildlife Department Khyber Pakhtunkhwa is at **Flag-B**.

5. The reasons/causes can be summed as under:

1. **Climate Change:** Rising temperatures, a key indicator of Climate Change, evaporate more moisture from the ground, drying out the soil, and making vegetation more flammable. At the same time, winter snowpacks are melting about a month earlier, meaning that the forests are drier for longer periods of time. As

⁷ Trees above the dia of 6" are calculated on cft. Below this are not considered as trees but plants.

⁸Human action includes advertent or inadvertent action by Grazers, tourists/ visitors/ rivals etc

⁹Natural causes include climate change, lightening, temperature transmission through rocks

drought and heat continue with rising greenhouse gas emissions, we expect more wildfires in years ahead, especially with the ***fire seasons getting longer***.

a. **Pakistan Meteorological data**

As per Pakistan Meteorological Department (PMD) statistics national rainfall for the month of March 2022 was 62% below normal and ranked 9th driest month since 1961 while rainfall was largely below normal over all parts of the country with Baluchistan (-66%), Sindh (-65%), Punjab (-65%), KP (-66%) & AJK (-48%) all experienced extreme deficient rainfall.

National rainfall for the month of April 2022 was 74%, largely below, normal and ranked 2nd driest month since 1961 while rainfall remained largely below normal over all parts of the country with Punjab (-89%), KP (-79%), Baluchistan (-78%), AJK (-56%) & GB (-51%) all experienced extreme deficient rainfall.

National rainfall for the month of May 2022 was 48.4% largely below normal while rainfall remained largely below normal over all parts of the country with Baluchistan (-91%), Sindh (-91%), GB (-59%), Punjab (-46%), AJK (-37%) & KP (-25%).

Therefore, the decrease in rainfall and increase in temperature inordinately is a trigger for fires.

b. **PDMA advisory report**

Owing to the extreme temperatures, PDMA (Met office & NDMA too) has already issued advisory reports from time to time on weekly basis. They have issued advisory on 4th June 2022 that the extreme heatwave conditions are likely to remain unusually high throughout KP during the June.

The GLOF alert issued by Cabinet Secretariat on 27th April 2022 states that “the temperature in GB & KP is expected to remain 5-7 degrees higher above normal for coming days creating heatwave type situation in Glaciated regions of GB & KP. It is more likely that this heatwave condition will enhance the melting rate of snow and ice which may trigger GLOF events/flash floods in the vulnerable areas of GB & KP.”

We need to accept that the climate change impacts are upon us.

2. **Deliberate Actions**

- a. The tourist visiting the forests for recreation purpose incidentally cause the forest fire and this year the biggest awareness drive was carried out by KP Forest Department during March and April educating the tourist through social media, banners, pamphlets and brochures distribution. The same was appreciated by the civil society.
- b. The Forest dependent communities traditionally burn dry grasses to get tender grass for livestock which sometimes results in forest fires due to winds and casual attitude of communities.
- c. Due to increase in population the demand for agriculture land has increased manifold and fire is put to clear the lands (April to June) for converting vegetated lands into agriculture fields – a reference to the grasses being put to fire.
- d. Usually due to local enmities the conflicting groups burn the agriculture produce and trees of the other resulting into huge forest fires as (in all probability) in case of huge Forest Fire of *Sherani* and *Shangla* incidents.
- e. Under BTAP and now 10-BTTP huge plantations are established on the property of the absentee owners in the rural areas which was previously utilized by other non-owners as grazing ground for their cattle. This has

developed a personal conflict of locals and due to their nuisance value has resulted in the fire incidences.

- f. Due to the floods in 1992, complete ban on the scientific harvesting of forests was imposed by the Federal Government. The same has further aggravated the local communities as their whole livelihoods depended on agreed upon shares from harvesting as per management plans, not to mention the revenue generated for government as well as the lessening of burden of import bill in shape of timber being imported.
- g. The Forest department was in practice of control burning (mostly in Chir Forest area in Dec & Jan) to avoid any ignitable burning material which has now been completely stopped due to multiple factors such as closeness of the population to forests and other engagements of the staff. This has made the forests vulnerable to forest fire incidences.
- h. Although natural hazard is also one of the main causes of Forest Fire, but it is very minimal in Pakistan. The main causes are lightning, high atmospheric temperature and dryness etc.
- i. Unfortunately, rumours also came out that government was providing compensation or was to provide compensation for damages in forests (**Flags C & D**) and this Department has an inkling this may also have contributed to some of the fires.
- j. And finally, population growth in itself along with investments in hospitality sector in hilly areas has caused both private housing as well as hotels etc to venture higher and deeper into forests, mountains and wooded areas.
- k. Support to above causes is the personal visits of the undersigned high and deep into forest area in last 10 days, where not only the heat storage in rocks etc was practically visible but also most of the springs had simply evaporated. Further, due to no scientific harvesting, dead and rotting trees were lying aplenty as ripe material for fires and the temperature (as per local lore) was 4-5 degrees higher than in corresponding days in yesteryears.

3. **Way-Forward**

While climate change requires another level of multi-sectoral action (KP's Action Plan 2017 has been updated as 2022), an exercise for preparation of dealing with more and more fires has already been submitted with some of the essentials as below:

- a. Identify/classify high-risk, medium-risk and low-risk areas – and further identify (i) where specialized units of Rescue-1122 require to be placed for high-risk areas access (ii) joint specialized units need to be placed for medium-risk areas & (iii) Forest & Wildlife dedicated units with communities need to place for low-risk areas.
- b. Identify requirements of infrastructure (preferably prefab) staff and equipment for these Specialized and general units – along with recurring cost (as need assessment after deducting the existing resources).
- c. Identify command and control mechanism for clear coordination & hierarchy (Incident Commander & all).
- d. Identify requirements for fire posts (one near *Makniyal* is nearly final) and/or drone surveillance where technology can reduce cost.
- e. Identify financial resources which can be tapped (one obvious choice is the Forest Development Fund which does include provision for one-time expenditure but not of recurring expenditure of pay of employees)

- f. The best tested option for Forest Fire extinguishing has been observed as fixed wing aircraft as in case of Sherani Chilgoza Forests fire during May 2022. Therefore, it has been proposed that an aircraft (crop duster size) be procured for the Fire-extinguishing purpose by the Government of KP which be utilized during Forest Fire Season by KP Forest Department and for the other uses on demand in non-fire seasons on payment to Government as below by:
- i. private Agriculturists for aerial spray of pesticides
 - ii. Agriculture Department for locust control and pesticide sprays
 - iii. Watering of plantations in hills during drought
- g. Scientific Management may be immediately restored so that the owners of the forests get some revenue from the forests to get their support in the protection of forests from fires. Furthermore, the tree debris, dying, dead and diseased trees will also be taken out of the forests for its cleanliness and reducing the vulnerability of the Forest Fires.
- h. A robust Communication system may be established for early detection of Forest fire incidence and communication for effective Forest Fire control in the field for the territorial staff.
- i. KP Forest Department and Wildlife Department are designed to protect designated areas – therefore a joint action plan (with cost sharing) needs to be framed with private and communal owners before the onset of next Fire Season with determined roles and responsibilities of both in advance to counter fire in private areas effective and timely.
- j. Control burning will be carried out as per past in Dec-Jan in *Chir* forest areas particularly; and
- k. From now onwards all the plantations and other such activities like sowing or Assisted Natural Regeneration will be planned for only designated Forests to avoid any further clash with locals on converting their grazing lands into forests.

Special gratitude to those who embraced shahadat while fighting fires this month:

(1) Mr Nizamullah, Rescue-1122 at Shangla, (2) L/N Ahmadullah of Mohmand Rifles at Mohmand & (3) Mr Satwal, community volunteer at Upper Kohistan

(Muhammad Abid Majeed)
Secretary
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