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**Name:**

**Registration No.:**

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**Program:** MSc Forestry Extension

**Semester:** Autumn 2026

# ALLAMA IQBAL OPEN UNIVERSITY, ISLAMABAD

**(Department of Computer Science)**

**Course: Participatory Forestry (2503) • Level: MSc Forestry Extension**

**Semester: Autumn 2026**

## Assignment No. 1

Total Marks: 100 • Passing Marks: 50 • All questions carry equal 20 marks.

## SOLVED ASSIGNMENT GUIDE — For Study & Reference

*Note: This guide is prepared for study and reference purposes only. Students are advised to read the relevant units of the course book, understand the concepts, and then write the assignment in their own words. Do not copy this guide word for word.*

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## Question 1: Who Are the Local People? Users and the State (20 Marks)

**Who are the local people in participatory forest management? Discuss the relationship between users and the state.**

### Introduction

Participatory forest management begins with a simple but far-reaching question: whose forest is it, in practice? For more than a century, forests in South Asia were administered as state property, guarded by a forest department, while the people who lived in and around them were treated mainly as a threat to be controlled. Experience in Pakistan, Nepal, India and many other countries has shown that this exclusionary model failed on both counts: forests continued to degrade, and local livelihoods suffered. Participatory forestry reverses the logic. It recognises

that the people who live closest to a forest, use it daily and depend on it for survival are its most permanent stakeholders, and that durable protection is possible only when those people gain recognised rights, real responsibilities and a fair share of benefits. This answer first identifies who 'the local people' actually are — a more varied group than the phrase suggests — and then examines the changing, often tense, relationship between forest users and the state.

## Who Are the Local People?

'Local people' means the individuals, households and communities who live in or near a forest area and whose everyday life is directly connected with it. They are not a single uniform group. A careful analysis, which every participatory programme must carry out at the start, distinguishes at least the following categories. First are the resident villagers and farming households who cultivate land adjoining the forest and collect fuelwood, fodder, grazing, timber for house construction and repair, wild fruits, honey, medicinal plants and other non-timber forest products. Second are the primary or direct users, whose dependence is heaviest: landless households, herders and graziers, fuelwood collectors and head-loaders, charcoal makers, and poor households that have no private trees of their own and therefore rely almost entirely on the common forest. Third are secondary users, who use the forest occasionally or seasonally — for example farmers who graze animals only in the dry season, traders who buy forest produce, and artisans such as carpenters, basket makers and leaf-plate makers whose raw material comes from the forest.

Fourth, local people include customary rights-holders: communities, clans and families whose claims rest on long usage, customary law and, in areas such as the former princely states and

tribal districts of Pakistan, on recognised communal ownership such as the shamilat and guzara forests. Fifth, women form a distinct and crucial category of local people. In most rural households women and girls carry the main burden of collecting fuelwood and fodder and of fetching water, so changes in forest condition affect their time, health and workload first; yet they are frequently invisible in formal meetings and committees. Sixth, local people also include resident forest staff, local leaders, elders and religious figures whose authority shapes whether rules are accepted. Finally, a distinction must be made between insiders who live within the forest landscape and nearby outsiders — such as migrant labourers, contractors and urban fuelwood buyers — whose interests may conflict with those of residents. A participatory programme that treats 'the community' as one undifferentiated block will usually end up serving its richer and more powerful members; identifying the different user groups, and especially the poorest and most dependent, is therefore the first practical step.

**Table 1: Main categories of local people and their typical forest interests**

| Category of local people | Typical dependence on the forest | Typical interest in management |
|---|---|---|
| Resident farming households | Fuelwood, fodder, grazing, small timber, leaf litter for manure | Reliable access, nearby supply, protection of crops |
| Landless and poor households | Almost total dependence for fuel, fodder and seasonal income | Free or cheap access, employment, share in benefits |

| | | |
|---|---|---|
| Herders and graziers | Grazing and browsing for livestock | Open grazing areas, fodder trees, water points |
| Women collectors | Daily fuelwood, fodder and water collection | Closer, safer and more abundant collection areas; a voice in decisions |
| Artisans and small traders | Raw material: bamboo, fibre, resin, medicinal plants | Sustained supply and fair prices |
| Customary rights-holders | Communal (shamilat / guzara) forests held by right | Recognition of ownership and customary rules |

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## The Relationship Between Users and the State

The state, acting mainly through the forest department, is the legal owner or custodian of most reserved and protected forests, the maker of forest law and policy, and the holder of technical expertise and enforcement power. Users, by contrast, hold the labour, the local knowledge and the daily presence on the ground, but historically held few legal rights. The traditional relationship was therefore one of command and control: the department planned, planted, guarded and harvested, while users were expected only to obey, and offences such as unauthorised grazing or felling were punished. This produced a well-documented pattern of mutual suspicion. Villagers saw the forester as a policeman who protected trees against people, and officials saw villagers as encroachers and thieves. Where people feel a forest belongs to the government and not to them, they have little reason to protect it, and may even damage it in

protest — a major reason why fenced, guarded plantations so often failed once project funding ended.

Participatory forestry seeks to rebuild this relationship as a partnership with clearly shared roles. In joint and community forest management arrangements the state typically retains ownership and the regulatory role — setting the legal framework, approving management plans, providing technical guidance, planting stock and research support, and intervening where wider public interests such as watershed protection or biodiversity are at stake. Users, organised in village organisations, joint forest management committees or community forest user groups, take on protection, day-to-day management, rule-making about grazing and harvesting, benefit distribution and conflict resolution within the village. Written agreements, benefit-sharing rules and recognised user rights — including, in stronger models, a defined share of timber revenue — convert an informal tolerance into a legal relationship. Nepal's community forest user groups and Pakistan's joint forest management committees in parts of Khyber Pakhtunkhwa and the social forestry projects elsewhere illustrate this shift, with varying degrees of real power transferred.

The relationship remains unequal and must be managed honestly. Common tensions include: insecure tenure, where users protect a forest for years without any guarantee that rights will not be withdrawn; delays and conditions in approving village plans, which keep real control with officials; unequal benefit sharing, where the department's share of revenue is decided by the department itself; elite capture, where village leaders allied with officials dominate the committee; and the department's own institutional culture, in which field staff trained for policing find facilitation and negotiation difficult. A healthy user–state relationship therefore

requires legal backing for user rights, transparent rules, staff reorientation and training, regular joint review meetings, and grievance mechanisms that villagers can actually use. Trust is built slowly, through the state keeping its promises on small matters — releasing an agreed share on time, approving a plan without unnecessary delay — and it is destroyed quickly when those promises are broken.

### Conclusion

In summary, 'the local people' in participatory forest management are the diverse resident users of the forest — farming households, the landless poor, herders, women collectors, artisans and customary rights-holders — each with different dependence, interests and power. The relationship between these users and the state has moved historically from exclusion and policing towards partnership, in which the state provides legality, technical support and wider safeguards while organised users provide protection, labour, local knowledge and day-to-day management. The partnership works only where rights are secure, benefits are shared fairly and women and the poorest users are genuinely included; where the state retains all real power, participation remains a slogan and the forest, as before, has no local guardian.

## Question 2: Institutions, the Forest Management Continuum, and Small Farmers and Trees (20 Marks)

**What does an institution mean? Graphically present the forest management continuum. Which factors are actually responsible for appraising and discouraging small farmers from planting and protecting trees?**

## Introduction

Participatory forestry is as much about institutions as it is about trees. A plantation can be raised in a single season, but it survives only where durable rules, organisations and relationships govern who plants, who protects, who may harvest and who benefits. This answer first explains what an institution means, distinguishing it from a mere organisation; it then presents the forest management continuum graphically, showing the range of arrangements between complete state control and complete local control; and finally it examines the factors that encourage — and, in the wording of the question, appraise the case for — and the factors that discourage small farmers from planting and protecting trees on their farms.

## What Does an Institution Mean?

An institution is an established set of rules, norms, customs and arrangements that structures how people behave towards one another and towards a resource. The economist Douglass North described institutions as the 'rules of the game' in a society: the humanly devised constraints that shape human interaction. Institutions include formal elements — written laws, forest acts, written agreements, constitutions of user groups, recorded rights and official procedures — and informal elements that are often equally powerful: customs, traditions, religious values, kinship obligations, customary grazing rules and unwritten understandings about who may cut what, and when. An organisation, by contrast, is a body of people — a forest department, a village committee, a cooperative — that works within and is shaped by institutions. The distinction matters practically: creating a village committee (an organisation) achieves little if the underlying rules (the institution) still deny villagers any right to the trees

they protect. Strong participatory forestry therefore works on both levels: it builds organisations such as user groups, and it reforms institutions — tenure rules, benefit-sharing rules, harvesting rights and decision-making procedures — so that local effort is rewarded rather than frustrated. Institutions also include mechanisms of enforcement and sanction, arrangements for resolving disputes, and shared values that make rules legitimate in people's eyes; a rule that the community itself has made and believes in is enforced by social pressure at almost no cost, whereas a rule imposed from outside needs guards and fines.

## The Forest Management Continuum — Graphical Presentation

Forest management arrangements are not simply 'state' or 'community'. They form a continuum, a sliding scale along which control, responsibility and benefits shift gradually from the state at one end to local people at the other. At the extreme left, the state manages alone and local people are excluded or merely informed. Moving rightwards, the state begins to consult people, then to collaborate with them, then to share management and benefits formally, until at the extreme right local communities hold secure rights and manage the forest themselves with the state in a supporting and regulatory role. Programmes in different places sit at different points on this continuum, and a sound policy moves arrangements steadily towards greater local rights where local capacity and dependence justify it — while recognising that some forests, for example critical protection forests, may legitimately remain nearer the state end.

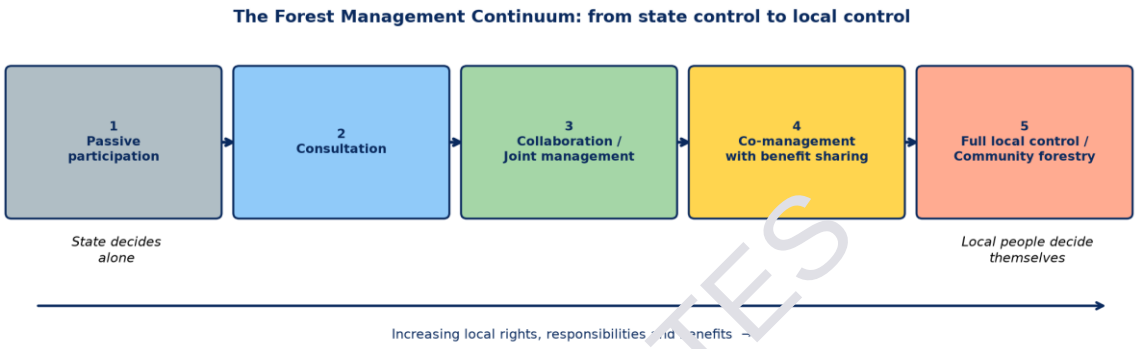



*Figure 1: The forest management continuum — arrangements range from exclusive state control (left) through consultation, collaboration and co-management to full local control (right), with local rights, responsibilities and benefits increasing along the scale.*

Reading the figure: in passive participation, people are only told what will happen; in consultation, their views are heard but the department still decides; in collaboration or joint forest management, plans are made together and protection is shared; in co-management, a written agreement divides rights, duties and income; and in full community forestry, a recognised user group makes its own constitution and operational plan, harvests according to that plan and retains the income, with the state auditing and advising. The continuum is a diagnostic tool as much as a description: asking 'where on this line does our programme actually sit — not in its documents, but in practice?' exposes many projects that claim partnership while operating at the consultation stage.

## Factors That Encourage Small Farmers to Plant and Protect Trees

- Secure tenure and ownership: a farmer plants a tree — an investment maturing over years — only when he is confident that the land and the tree belong to him and that he or his

children will harvest it. Clear land title and an undisputed right to fell and sell one's own trees are the strongest single incentives.

- Assured and fair markets: a reachable market and a reasonable price for timber, fuelwood, fruit and fodder make trees a paying crop rather than a burden; farm forestry expanded rapidly wherever plywood, paper and construction demand assured buyers.
- Household needs met on the farm: trees that supply fuel, fodder, fruit, shade and construction material at the doorstep save cash and women's labour, so need itself encourages planting where species match household priorities.
- Suitable technology and support: availability of quality seedlings of wanted species, at the right time and place, plus simple extension advice on spacing, protection and pruning, lowers the risk and effort of planting.
- Credit, incentives and recognition: subsidies, free or cheap plants, and public recognition of successful tree growers help, provided they reward survival and care rather than mere distribution of seedlings.
- Social and religious values: traditions of planting for charity, shade for travellers, mosque and graveyard planting, and community esteem for tree growers reinforce economic motives.

## Factors That Discourage Small Farmers from Planting and Protecting Trees

- Insecure tenure and restrictive rules: tenancy on another's land, disputed ownership, and — historically a major disincentive — laws requiring official permission to fell or transport even privately planted trees, which made a mature tree a legal liability instead of an asset.

- Long waiting period and risk: trees occupy land for years before yielding income; a small farmer with pressing food needs, facing risks of drought, browsing damage, theft and fire, rationally prefers a quick annual crop unless tree returns are clear.
- Small holdings and competition with crops: on a tiny farm every row of trees shades or competes with food crops, so without suitable designs – boundary planting, block planting on poor patches, agroforestry combinations – trees appear to cost food.
- Weak markets and middlemen: distant markets, poor roads and monopsonistic buyers depress farm-gate prices, so farmers conclude that trees do not pay.
- Lack of seedlings, knowledge and follow-up: planting stock arriving late, of unwanted species or poor quality, and extension visits that end with the planting campaign, produce high mortality and deep discouragement.
- Free grazing and social friction: uncontrolled livestock browsing destroys young plants, and a farmer who protects his trees while neighbours graze freely bears the whole cost of a collective problem.
- Policy bias towards state forestry: where all attention, staff and funds go to departmental plantations, farm forestry receives neither research nor respect, and farmers read the signal correctly.

## Conclusion

To conclude, an institution is the set of formal and informal rules that governs behaviour around a resource, and it is these rules — more than the creation of committees alone — that determine whether participation is real. The forest management continuum shows

management arrangements on a scale from exclusive state control to full local control, and honest programmes locate themselves on it and move deliberately towards shared or local management. For small farmers, the decision to plant and protect trees is a rational response to incentives: secure tenure, clear felling and sale rights, good markets, suitable species and dependable support encourage planting, while insecure rights, restrictive rules, long and risky waits, weak prices, browsing damage and neglect discourage it. Policy that wants more trees on farms must therefore change the farmer's arithmetic, not merely exhort him to plant.

## Question 3: Participatory Assessment, Monitoring and Evaluation in Community Forestry (20 Marks)

**How would you explain the concept of participatory assessment, monitoring and evaluation in community forestry? Also discuss their benefits for both insiders and outsiders in project evaluation.**

### Introduction

Conventional project evaluation was something done to a community by outsiders: experts arrived at the end of a project, counted surviving trees and houses covered, filled in formats, and left with a report the community never saw. Participatory assessment, monitoring and evaluation — often shortened to participatory M&E or PM&E — turns this process inside out. In community forestry it means that the local people who manage the forest systematically assess their situation, track changes as management proceeds, and judge results against their own as well as the project's criteria, with outsiders acting as facilitators and partners rather than

inspectors. This answer explains each of the three concepts, shows how they fit together as a learning cycle, and then discusses the distinct benefits they bring to insiders — the community — and to outsiders — the project staff, forest department and donors.

## The Three Concepts Explained

Participatory assessment is the joint examination of the starting situation. Before or alongside planning, community members and facilitators together map the forest and village resources, rank problems and opportunities, reconstruct the history of the forest's condition, and identify who uses what. Simple visual tools — resource maps drawn on the ground, seasonal calendars, transect walks, well-being ranking and Venn diagrams of local institutions — allow even non-literate members to analyse their own reality. The product is not merely data; it is a shared understanding and a baseline, agreed by the community itself, against which later change can be judged. Participatory monitoring is the regular, routine tracking of what is happening while the work is in progress: survival and growth of plantations, number of protection patrols held, grazing or illicit cutting incidents, volume of produce harvested and distributed, attendance and decisions of the user group, and funds received and spent. Because monitoring is done by the community — for example by a small monitoring team reporting to the general assembly — problems such as poor seedling survival or an unfair distribution are detected and corrected within the season, not discovered in a final report years later.

Participatory evaluation is the periodic, reflective judgement of results: at the end of a season, a phase or the project, insiders and outsiders together ask what changed, why, for whom, and what should be done differently. The community compares the present with its own baseline,

applies its own criteria of success — which may include women's time saved, fairness of sharing and reduction in conflicts, alongside tree survival — and draws lessons for the next plan. Together the three form a continuous learning cycle: assessment informs planning, monitoring steers action, evaluation feeds the next round of assessment and planning. Participation here is not a technique for extracting information more cheaply; it is a redistribution of the right to define success and to judge it.

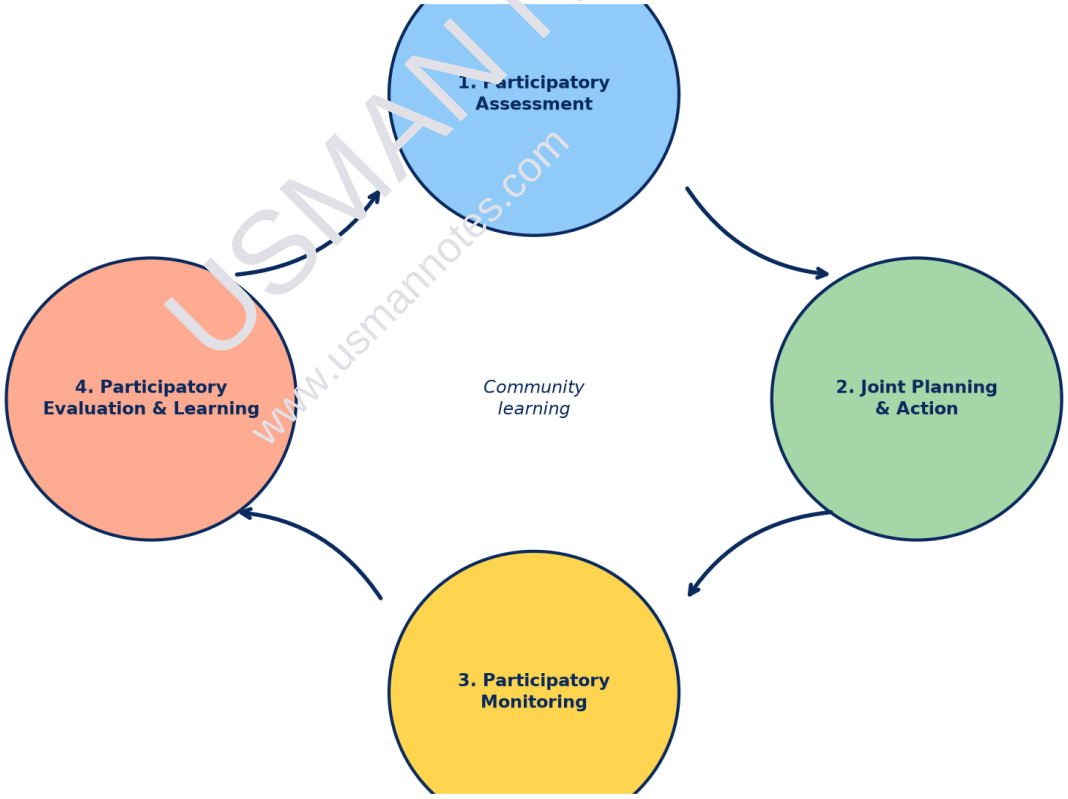



*Figure 1: The participatory assessment, monitoring and evaluation cycle — each stage feeds community learning and the next round of planning.*

### Benefits for Insiders — the Community

- Ownership and motivation: people who set the indicators and judge the results regard the findings as theirs; evaluation stops being an external inspection to be feared or gamed, and becomes a community habit of reviewing its own work.
- Learning and capacity: analysing maps, records and trends builds skills in observation, record-keeping, accounting and negotiation that remain in the village long after the project leaves, strengthening the user group as an institution.
- Timely correction: community monitoring spots failures early — a dying plantation block, a leaking check dam, an inactive committee — while correction is still cheap and possible.
- Accountability within the community: open reporting of harvests, income and expenditure to the general assembly restrains elite capture and corruption by office-bearers, because the members themselves hold the figures.
- Inclusion of local criteria and voices: insiders can insist that success include what matters to them — fodder availability in the dry season, women's workload, benefits reaching the poorest — and women and poorer members gain a recognised forum in which to present evidence.
- Confidence in dealing with outsiders: a community with its own records negotiates with departments and donors from knowledge rather than dependence, and can demonstrate its achievements credibly.

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### Benefits for Outsiders — Project Staff, Department and Donors

- Richer and more honest information: outsiders gain access to local knowledge and to trends that official returns conceal; villagers report failures frankly to a process they own, whereas they hide them from an inspection.
- Lower cost and wider coverage: community monitors are present every day at negligible cost, so monitoring covers the whole forest continuously instead of relying on occasional staff tours.
- Better decisions and adaptive management: findings expressed in locally meaningful terms show managers not only whether targets were met but why, enabling realistic revision of plans, species choices and benefit-sharing rules.
- Legitimacy and reduced conflict: when evaluation is joint, its conclusions — including unwelcome ones — are accepted by both sides, and disputes about project performance decline.
- Sustainability after withdrawal: outsiders can withdraw with evidence that a local system for reviewing and correcting management exists, which is the strongest available predictor that the forest will continue to be managed.
- Accountability upwards, properly grounded: donors and senior managers receive reporting that has been verified by the intended beneficiaries themselves, which is more credible than figures generated solely by implementing staff.

Participatory M&E also has limits that honest discussion must note. It takes time, especially at first; it requires facilitators skilled in listening rather than lecturing; dominant villagers may try to control the process as they control other forums, so separate discussions with women and

poorer groups are often necessary; and community indicators must be linked sensibly with the technical measurements — such as forest inventory data — that communities cannot easily make alone. The strongest systems are therefore joint in a real sense: insiders lead on relevance, observation and judgement, outsiders contribute technical measurement, comparison with other sites and an outside perspective that can raise uncomfortable questions insiders might avoid.

### Conclusion

In conclusion, participatory assessment, monitoring and evaluation in community forestry is a continuous cycle in which the community itself examines its starting point, tracks progress and judges results, supported — not supplanted — by outsiders. For insiders it brings ownership, learning, early correction, internal accountability and a voice in defining success; for outsiders it brings honest information, low-cost coverage, better decisions, legitimacy and credible evidence of sustainability. Its deepest benefit is shared: evaluation ceases to be a verdict delivered at the end and becomes the learning mechanism by which a community forest is managed, season after season.

## Question 4: State and Private Forests in Pakistan — Situation and Forest Types (20 Marks)

**In Pakistan, forests are broadly divided into state and private lands. Describe their current situation and the forest types of both farmlands.**

## Introduction

Pakistan is a forest-poor country. Only around five per cent of its land area carries forest cover of any kind — far below the roughly twenty-five per cent commonly regarded as desirable for a country with Pakistan's mountains, rivers and climate — and per capita forest area is among the lowest in the world. This scarce forest estate is broadly divided, by ownership, into state forests, administered by the provincial forest departments, and private and communal forests, owned by individuals, families, villages and communities. The two categories differ in legal status, management, condition and the kinds of forest they contain. This answer describes the current situation of each category and then outlines the principal forest types found on state lands and on private farmlands. Figures given below are the approximate, widely reported orders of magnitude used in course material; precise percentages vary slightly between official sources and survey years, and students should consult the latest Pakistan Forest Institute and provincial department figures for examination updating.

## State Forests: Current Situation

State forests comprise the reserved forests, protected forests and unclassed or resumed lands vested in government, together with state plantations and the great riverine and irrigated plantation estates. Reserved forests, notified under the forest law originating in the Forest Act of 1927, are the most strictly controlled: rights are settled and recorded, and grazing, felling and clearing are prohibited or tightly regulated. Protected forests carry a lighter legal regime, in which recorded rights continue subject to departmental control. Geographically, state forests dominate in the northern mountains — the coniferous forests of Khyber Pakhtunkhwa, Gilgit-

Baltistan and Azad Jammu and Kashmir — and in the riverine belts and irrigated plantations of Punjab and Sindh. Their current situation is mixed. They hold the country's most valuable timber and its critical watershed and biodiversity assets, and departmental protection has preserved core areas that would otherwise have been cleared. At the same time they face chronic pressures: illicit felling and organised timber smuggling in accessible areas, encroachment for cultivation, heavy grazing, fire, shortages of staff and funds, and long-standing friction with local communities who bear the costs of protection — lost grazing and access — while seeing few benefits. Management has traditionally followed working plans prepared by the department, with local participation introduced only recently and unevenly through joint forest management and community agreements.

## Private and Communal Forests: Current Situation

Private forests include individually owned woodlots and farm trees, and — quantitatively more important in the hills — the communal guzara and shamilat forests owned jointly by village communities and proprietors, especially in Hazara, Murree, Azad Jammu and Kashmir and parts of Balochistan, along with community forests in Gilgit-Baltistan and the juniper tracts managed with tribal institutions. Guzara forests were historically set aside to meet the bona fide domestic needs of the owning villages, with the forest department exercising technical supervision and sharing in any commercial sale proceeds. Their current situation is generally more precarious than that of state forests. Population pressure, subdivision of holdings, division of communal land among growing numbers of shareholders, weak or inactive village management bodies and uncertain enforcement have led in many places to over-cutting, heavy grazing and conversion of forest to cultivation or housing. Where owners receive little income

and less technical support, a standing tree is often worth less to them than the land beneath it. Yet private land also supplies the encouraging half of the picture: the great majority of Pakistan's industrial wood and fuelwood now comes not from state forests but from trees grown on private farmland — farm forestry in the irrigated plains has expanded because farmers own the trees, may sell them freely and find ready markets. The lesson of the contrast is central to this course: condition follows incentives and rights more than it follows ownership labels alone.

**Table 1: State and private/communal forests in Pakistan compared**

| Feature | State forests | Private / communal forests |
|---|---|---|
| Ownership and control | Government; managed by provincial forest departments under forest law | Individuals, families and village communities; departmental role mainly supervisory in guzara areas |
| Main legal classes | Reserved, protected, unclassed state forests; state plantations | Guzara and shamilat (communal), individual farm and woodlot trees |
| Main strengths | Watershed, biodiversity and timber assets; professional protection of core areas | Farm forestry supplies most marketed wood; direct link between owner and benefit |
| Main problems | Illicit felling, encroachment, | Over-use of communal |

| | | |
|---|---|---|
| | grazing pressure, conflict with local users, staff and fund shortages | forests, weak village bodies, subdivision, conversion to other uses |
| Direction of reform | Joint forest management and benefit sharing with local users | Strengthening community institutions, technical support and market access for owners |

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## Forest Types on State Lands

Because state forests span the full altitudinal and climatic range of Pakistan, they include nearly all of the country's recognised ecological forest types. In the north, the montane coniferous forests of deodar, blue pine (kail), spruce and fir dominate moist temperate slopes, with dry temperate coniferous and juniper forests in the drier inner valleys and Balochistan. Below them lie sub-tropical pine (chir pine) forests and, in the foothills, sub-tropical broad-leaved scrub. The state estate also includes the alpine pastures and birch and juniper scrub above the tree line, important for grazing and watershed stability. In the plains, the characteristic state forests are the riverine (bela) forests of the Indus and its tributaries — dominated by shisham, babul (Acacia nilotica), poplar and tamarisk on land flooded and renewed by the river — and the irrigated plantations such as Changa Manga and Chichawatni, raised on canal irrigation with shisham, mulberry, eucalyptus and poplar. In Sindh and the south, state lands also carry tropical thorn forest of babul, tamarisk and Prosopis, and the mangrove forests of the Indus delta,

which protect the coast and nurse marine fisheries. This classification follows the standard ecological grouping of Pakistan's forests used in course material; local names and boundaries vary between textbooks.

## Forest Types on Private Farmlands

Private farmland does not usually carry natural forest in large blocks; its 'forest types' are the tree-growing systems farmers actually practise. The first is scattered farm trees: individual shisham, mango, jamun, neem, babul, ber and other trees retained or planted in and around fields, valued jointly for timber, fruit, shade and fodder. The second is boundary and linear planting: rows of poplar, eucalyptus or shisham along field edges, roads, watercourses and farm tracks, which use minimal crop land and are the fastest-growing source of farm timber in the irrigated plains. The third is block woodlots: small compact plantations, often of poplar, eucalyptus or shisham, on poorer or surplus patches, managed on short rotations for the market. The fourth is agroforestry in the strict sense: trees deliberately combined with crops or livestock in the same unit — wheat or fodder under widely spaced poplar or shisham, fodder trees lopped for animals, and homestead gardens mixing fruit, fuel and fodder species around the house. In the hills, private and communal lands additionally carry natural or semi-natural stands — oak, pine and broad-leaved guzara forest — managed (or over-used) as common property rather than as farm planting. Taken together, farmland trees now constitute a larger and faster-growing wood resource than the state forest estate, which is precisely why participatory and farm forestry receive so much attention in policy.

### Conclusion

To conclude, Pakistan's forests divide by ownership into state forests — legally stronger, professionally managed, holding the great coniferous, riverine, irrigated-plantation and mangrove estates, but under severe pressure and historically closed to local people — and private and communal forests, including guzara and shamilat lands and the trees of farmland, which suffer from weak collective management in the hills yet supply most of the nation's wood through vigorous farm forestry in the plains. The policy direction implied by both halves of the picture is the theme of this course: give users and owners rights, support and a fair return, whether the partner is a village beside a reserved forest or a farmer deciding what to plant along his field boundary.

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## Question 5: Colonialism and Commercialism in Forestry;

## Terminologies of Participatory Forestry (20 Marks)

**Differentiate between colonialism and commercialism with respect to forestry. Describe the characteristics of various applied terminologies of forestry.**

### Introduction

Modern forestry in South Asia was shaped by two powerful forces that are easily confused but must be distinguished: colonialism, the political system under which a foreign power ruled the territory, and commercialism, the economic orientation that manages a forest primarily for saleable produce and revenue. Colonial forest administration in the subcontinent was strongly commercial, but the two ideas are not identical — commercial forestry continued and even

intensified after independence under national governments. Understanding the difference explains both the origin of state forest control and many present-day conflicts between departments, markets and communities. The second part of this answer describes the characteristics of the main terminologies applied in and around participatory forestry — social forestry, community forestry, joint forest management, farm and agroforestry and related terms — which students frequently confuse with one another.

## Colonialism in Forestry

Colonial forestry refers to the forest administration created under British rule, principally from the establishment of the Imperial Forest Department in 1864 and the succession of Forest Acts (1865, 1878 and 1927) that followed. Its defining feature was the assertion of state sovereignty over forests: vast areas of customarily used land were notified as reserved or protected forest, customary rights were 'settled' — in practice usually reduced, recorded restrictively or extinguished — and local use became a privilege or an offence rather than a right. The purpose of this control was imperial: to secure strategic supplies, above all deodar and sal timber for railway sleepers, shipbuilding and construction, and to generate revenue for the colonial state. Its methods were exclusion and enforcement: a uniformed, hierarchical forest service; working plans oriented to sustained timber yield for the state; guards, fines and prosecutions; and the scientific forestry of even-aged, single-species stands imported from Europe. Local people figured in this system mainly as labour and as a source of offences. The institutional legacy — state ownership, restrictive law, a policing culture and the legal framework of the 1927 Act — survived independence largely intact, which is why present-day participatory reform is often described as the decolonisation of forest management.

## Commercialism in Forestry

Commercialism is an orientation, possible under any political system, in which the forest is valued chiefly as a source of commodities for sale: industrial timber, pulpwood, poles, resin and other marketed produce, managed to maximise financial return. Under commercial management, species are chosen for market demand and fast growth rather than local need; harvesting is organised for contractors and industry; success is measured in volume sold and revenue earned; and non-marketed values — subsistence fuel and fodder, biodiversity, cultural and protective functions — are treated as secondary. Commercial pressure long pre-dates and long post-dates colonialism: pre-colonial rulers taxed forest produce, and after independence national governments and development projects promoted commercial plantations, industrial concessions and contractor felling — the contractor system becoming notorious for over-felling and for the corruption linking contractors, officials and politicians. Commercialism is not wholly negative: markets give trees value, finance management and supply cities and industry, and farm forestry flourishes precisely because farmers can sell. It becomes destructive when commercial extraction is combined with insecure local rights, so that those who bear the costs of protection receive none of the commercial benefit and have no power to limit harvesting to sustainable levels.

**Table 1: Colonialism and commercialism in forestry differentiated**

| Aspect | Colonialism in forestry | Commercialism in forestry |
|---|---|---|
| Basic nature | A political system of foreign rule and state appropriation | An economic orientation: managing forest chiefly for |

| | | |
|---|---|---|
| | of forests | sale and revenue |
| Historical period | Principally British rule, 1860s–1947; institutions inherited after independence | Found before, during and after colonial rule; strong in modern industrial forestry |
| Primary objective | Strategic timber supply and revenue for the imperial state; territorial control | Maximum marketed output and financial return for state, industry or owner |
| Treatment of local rights | Customary rights curtailed, recorded restrictively or extinguished by settlement | Local subsistence uses undervalued because they are unmarketed, whatever the regime |
| Typical instruments | Forest Acts, reservation, guards, working plans, prosecution | Concessions, contractors, market-driven species choice, volume and revenue targets |
| Present-day legacy | State ownership, restrictive law and policing culture that participatory reform seeks to change | Continuing pressure for industrial plantations and commercial felling, needing regulation and benefit sharing |

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## Characteristics of the Applied Terminologies of Participatory Forestry

- Social forestry: the umbrella term, popularised from the 1970s, for forestry intended to meet the needs of society — especially the rural poor — rather than industry alone. Its characteristic features are production of fuel, fodder, small timber and other subsistence goods; planting on village commons, roadsides, canal banks and farms as much as in state forests; and an explicit welfare objective. It broadened forestry's goals but in early practice often remained department-led, with people as labour rather than decision-makers.
- Community forestry: forestry in which a defined local community holds recognised rights to manage a defined forest and retain its benefits, under its own institution and plan — Nepal's community forest user groups are the classic case. Characteristics: legal handover of management, community constitution and operational plan, local rule-making and fund, and the state in a regulatory and support role. It sits at the local-control end of the management continuum.
- Joint forest management (JFM): a partnership in which the state and local communities manage (usually degraded) state forest together under a written agreement, sharing protection duties and produce. Characteristics: the state retains ownership; a village committee is formed; benefit sharing is specified in advance; planning is joint but department approval is retained. It occupies the middle of the continuum.
- Farm forestry: tree growing by individual farmers on their own land, mainly for sale and household use. Characteristics: private ownership and full farmer control, market orientation, species and designs chosen by the household, and minimal state role beyond seedlings, advice and a liberal felling and transit regime.

- Agroforestry: the deliberate combination of trees with crops and/or livestock on the same land unit. Characteristics: ecological and economic interaction between components (shade, fodder, nutrient cycling, staggered income), a wide range of designs from boundary planting to alley cropping, and suitability for small farms where pure tree blocks would compete too strongly with food crops.
- Participatory forestry: the widest term, describing not one model but an approach — any forestry in which local people participate meaningfully in decisions, work, benefits and evaluation. Its characteristics are process values: inclusion of women and the poor, local knowledge respected alongside technical knowledge, negotiated agreements, and accountability to users. Social, community, joint and farm forestry can all be practised participatorily — or, if people are merely used as labour, not practised participatorily at all.
- Extension forestry and urban forestry (related applied terms): extension forestry carries tree planting beyond traditional forest areas through motivation, demonstration and support to farmers and institutions; urban or amenity forestry manages trees in towns for shade, beauty, recreation and environmental health rather than produce. Both share participatory forestry's service orientation towards people's needs.

## Conclusion

In summary, colonialism in forestry was a political order that appropriated forests for an imperial state and suppressed customary rights, while commercialism is an economic orientation that manages forests for marketed output and revenue under any regime; the two overlapped under colonial rule, and commercialism's pressures — like colonialism's legal legacy — persist today and must both be addressed by reform. The applied terminologies of the

participatory family each name a different arrangement of ownership, control and purpose: social forestry states the welfare goal, community forestry vests management in the community, joint forest management formalises state–community partnership, farm forestry rests on the individual owner, agroforestry describes tree–crop–livestock combination, and participatory forestry names the inclusive approach that should run through them all. Using the terms precisely is not pedantry: the right term tells the student exactly who decides, who works, who benefits and who owns — the four questions on which every forest programme succeeds or fails.

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