# MINERAL ECONOMICS AND BUSINESS

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### Week 1

# Lecture 05: Acts and Regulations - II

Hello, welcome everybody. In today's class, we will be discussing the remaining part of the action regulation that we will be discussing for now. There will be several references to our action regulation in the entire course, many times we will be referring to this. But here in this case, we will be covering in this particular lecture, we will be covering the royalties part which is very important, debt rent. Then 2 very important organizations under this act like entities you may say also, district mineral foundation, natural mineral exploration trust.



and certain special provisions for the atomic and coal minerals and we will of course, at the end we will be talking about the schedules and the content of the schedules there. Now, the royalty is very very important in terms of mining operations because a huge amount of income of government in the form of royalty is accrued by the state government mainly. and ah and and in our ah ah in our country the total amount of royalty paid by the ah by the mining companies is used. So, let us first understand this royalty which is actually levied as a percentage of the sale value or a fixed per unit rate.

So, that is there in the schedule that I will show later on depending on which mineral you are talking about. So, it is not exactly just simply a tax, but is a kind of taxation, but it is levied as a percentage of the sale value or a fixed per unit rate. And the dead rent as we will be referring to is a minimum amount payable in a year by a person or whom a mining lease is granted irrespective of the fact whether you are ah whether the mining lease is being operated or not operated. Of course, there are ah there are a conflict or rather ah a comparison between the royalty and dead rent special cases that we will be discussing very soon. The district mineral foundation is a very very important advancement in the area of the social service provided by the mining industry and it is basically a non-profit trust

# **Key terms**

- Royalty Royalty is levied as a percentage of the sale value or a fixed per-unit rate, depending on the mineral.
- Dead Rent minimum amount payable in a year by a person to whom a mining lease is
  granted irrespective of the fact whether such mining lease is operated or not.
- District Mineral Foundation It is a non-profit trust, established in a mining-affected district to benefit individuals and areas impacted by mining operations, with rules prescribed by the State Government.
- National Mineral Exploration Trust (NMET): The Central Government is responsible
  for establishing the NMET as a non-profit autonomous body to promote mineral
  exploration.







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Established in a mining-affected district to benefit the individuals and areas that are affected or impacted by the mining operations. So, these rules are prescribed by the state government, but the basic idea can also be found in the National Mineral Policy of 2019. There, you can see that the details of the philosophy behind the policy and the formation

of the District Mineral Foundation are very nicely described. Another important move in the development, especially in exploration and building the database or information about mineral resources and reserves, is the formation of the National Mineral Exploration Trust. The central government is responsible for establishing the NMET, which is a non-profit autonomous body.

Its purpose is to promote mineral exploration. That means when we mine any minerals, whether coal or other minerals, a portion of the income from those operations goes to the National Mineral Exploration Trust. Thereby, it builds up a good corpus. So, the industry itself supports the exploration of minerals further and then the mining of those minerals. That means it is a self-promoting initiative that helps the industry grow.



- Exemption for Coal Consumption by Workers: No royalty is payable for coal consumed by colliery workers, provided their consumption does not exceed one-third of a tonne per month.
- Amendments to Royalty Rates: The Central Government may amend the Second Schedule to
  adjust royalty rates, but such changes cannot increase rates for any mineral more than once
  every three years.







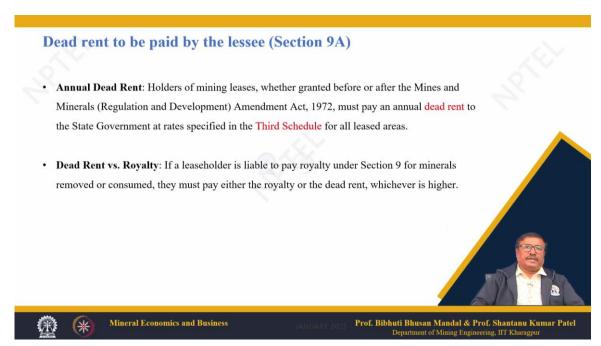
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Now, the varieties in respect of mining leases, as detailed in Section 9, which we will see, also include how the rates are calculated. But there is a question: since coal is produced by the coal company, some part is consumed by the workers themselves. So, the government has made an exemption in this regard: no royalties should be paid or are payable for coal consumed by colliery workers. Provided their consumption does not exceed one-third of a ton per month; exceeding that will fall under royalty. And the amendments to the royalty rates—so it is not a very fixed amount.

So, central government may amend the second schedule in which the rates of royalties have been prescribed. The debt rent is very important to understand that the holders of

mining leases whether it is granted before or after the MMRD 1972 amendment act must pay an annual dead rent to the state government at rates that is prescribed in the specified in the third schedule. So, ah dead rent there is a rate that I will show later on, but say dead rent versus royalties. So, in the beginning say when we are started starting mining operations, then we will be excavating and then sailing outside.



So, there again you are then liable to pay royalty pay royalty. The question is that should pay when the mining you have started should we pay royalty or we should pay dead rent. The solution is very simple that when minerals are removed or say consumed. So, they must pay either the royalty or the dead rent whichever is higher. That means, in the beginning you will see that the amount that royalty calculated on the sale of sale realization of the company will be lesser compared to the dead rent.

So, as long as the dead rent is more than the royalty then you go on paying dead rent. The moment the royalty exceeds the dead rent you start paying the royalty thereafter. Now the in case of district mineral foundation as we have just mentioned before in under section 9B, the state government must ensure that the district mineral foundation rules align with the constitutions fifth and sixth schedules. That means, the panchayats extension to scheduled areas. So, I mean the you should not conflict with the basic acts of like 1996 and the forest rights act 2006 and the funding contribution.

# **District Mineral Foundation (Section 9B)**

- Guiding Provisions: The State Government must ensure DMF rules align with the Constitution's Fifth and Sixth Schedules, the Panchayats (Extension to Scheduled Areas) Act, 1996, and the Forest Rights Act, 2006.
- Funding Contributions (Post-2015 Leases): For leases or composite licenses granted after
  the 2015 Amendment Act, holders must pay an amount to the DMF, up to one-third of the
  royalty paid, as specified by the Central Government.
- Funding Contributions (Pre-2015 Leases): Holders of mining leases granted before the 2015 Amendment Act must also contribute to the DMF, up to the full royalty amount, following Central Government rules based on lease categorization.





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The post-2015 leases or composite licenses granted after the 2015 amendment act of MMRD. The holders must pay an amount to the DMF, meaning the District Mineral Fund, up to one-third of the royalty paid. So, first you find out the sales realization, and from there you calculate the royalty. And then, one-third of the royalty will be taken as the DMF fund, which goes to the district fund. Now, pre-2015, the holders of mining leases granted before the 2015 amendment act also contribute to the DMF, but that is up to the full royalty amount because the rates were different at that time.

So, after the major amendments in 2015, The general rule is that one-third of the royalty being paid by the company will be paid as the DMF, paid to the DMF. About the National Mineral Exploration Trust in Section 9C, the objective is that the NMET will utilize its funds for regional and detailed mineral exploration, with operational guidelines

# **National Mineral Exploration Trust (Section 9C)**

- Objective: The NMET will utilize its funds for regional and detailed mineral exploration, with operational guidelines prescribed by the Central Government.
- Funding Contributions: Mining lease or composite license holders must contribute an amount equivalent to 2% of the royalty paid, as per the Second Schedule, in a manner specified by the Central Government.





prescribed by the central government. Now, the funding contribution: the mining lease or composite license holders, as the case may be, will contribute an amount equivalent to 2 percent of the royalty. So, first we calculate the royalty; 30 percent of that royalty goes to the DMF, as we have said earlier, and then an additional 2 percent of the royalty will go to the National Mineral Exploration Trust.So, this fund will now accumulate to build up a corpus for the purpose of supporting the expenses incurred for prospecting and exploration. It is given in the Second Schedule in a manner specified by the central government. Now, there are different schedules which are very important. What are these schedules about? So, the schedules in the MMDR Act provide detailed and structured provisions that complement the main legislative framework.

So, whenever you are going through different sections of the of the act, then you will see that they are referring very often they are referring to certain schedules and they will complement the purpose of the different sections. So, they outline the critical aspects such as the mineral classification and in part A, part B of the first schedule, part C, part

# Schedules in the MMDR Act, 1957

#### What are Schedules?

- Schedules in the MMDR Act provide detailed and structured provisions that complement the main legislative framework.
- · They outline critical aspects such as:
  - · Minerals classification.
  - · Rates of royalty and dead rent.
  - · Conditions for mining operations and payments.







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D. Then what are the rates of royalty and dead rent that is also specified in the schedule. Conditions for mining operations and different payments to be made. The first schedule is specified minerals requiring central oversight. Then the second schedule is the rates of royalty for different minerals.

### **Overview of the Schedules**

- 1. First Schedule: Specified minerals requiring central oversight.
- 2. Second Schedule: Rates of royalty for different minerals.
- 3. Third Schedule: Dead rent rates applicable to leases.
- 4. Fourth Schedule: List of notified minerals.
- 5. Fifth Schedule: Additional payments for surplus minerals in captive mines.
- 6. Sixth Schedule: Conditions for sale of surplus minerals.
- 7. Seventh Schedule: Minerals for exploration through auction

#### Significance

The schedules act as a detailed reference for stakeholders, ensuring transparent and systematic
operations within the mining sector.







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The third schedule as I said it is talking about the dead rent rates, dead rent rate applicable to different leases. Fourth schedule talks about the notified minerals. Then fifth schedule additional payments for surplus minerals in captive mines. For captive purposes, we are giving mineral

So, if we are selling certain surface mineral after fulfilling the requirement of the captive plant, then we have to we can sell definitely, but in that case we have to pay some additional amount to the government. In the sixth schedule, we have the conditions for sale of surplus minerals, again it is related to the fixed plant requirement. Now minerals for explorations through auction, this is in the 7th schedule, this is amendment much later on and these are the 7 schedules in the act. In the first schedule where you see the part a and it is and being referred to several sections as we have listed on the on the top. So, the part A is hydrocarbons and energy minerals, the classification is coal and lignite, hydrocarbons and the energy minerals, coal and lignite.

# **THE FIRST SCHEDULE - Specified Minerals**

[See sections 4(3), 5(1), 7(2)1 [8(1), 8A(1), 10A, 10B(1), 10C(1), 11(1), 11B, 11C, 12A(1), and 17A(2A)]]

#### PART A. Hydro carbons Energy Minerals

1. Coal and Lignite.

#### **PART B. Atomic Minerals**

- 1. Minerals of the "rare earths" group containing Uranium and Thorium.
- 2. Phosphorites and other phosphatic ores containing Uranium.
- 3. Pitchblende and other Uranium ores.
- 4. Uraniferous allanite, monazite and other thorium minerals.
- Uranium bearing tailings left over from ores after extraction of copper and gold, ilmenite and other titanium ores.
- Beach sand minerals, that is, economic heavy minerals found in the teri or beach sands, which include ilmenite, rutile, leucoxene, garnet, monazite, zircon and sillimanite.







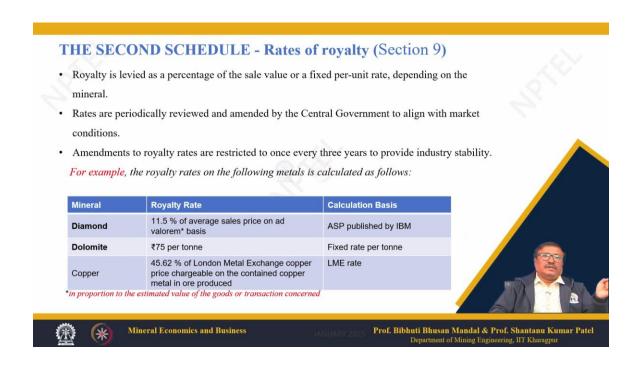
And then part B is the atomic minerals. In case of atomic minerals, the minerals of the rare earth group containing uranium, thorium or say phosphorites and other phosphatic ores containing uranium or other uranium ores all these things what is ah listed here like say beach sand minerals. There you have to have a specific approval of the central government for awarding the the ah the mining or the composite licenses specifically for part b. Here you see the as we have in the previous lectures, we have referred to the metallic and non metallic minerals.



So, that goes nowadays for different auctions. So, here you see the metallic and non metallic minerals are there are 10 such minerals like asbestos, bauxite, chrome ore, copper ore, gold, iron, lead, manganese, precious stones and There is a very important addition in this which is part d that is a critical and strategic minerals Now, the list as recently ah there is a modification also which is not ah included in this particular part that these are this has been identified as very critical and ah for the development of our nation. So, here we have listed all this 24 here which there are certain other changes recently that you may find out in the ah internet resources also.

There is a notification by the government of India in respect of the critical mineral especially. So, for this the government is taking special initiative for auctioning this all these all these mineral bearing zones. and trying to expedite the process of mining. So,

that this critical the minerals of critical nature or strategic minerals that can be mined first and they can contribute first to the growth of the nation. In the second schedule, we have been talking about the rates of royalty like the which is detailed in section 9.



So, as I said earlier also that royalty is levied as a percentage of sale value or fixed per unit rate. So, we can see that in the table that is presented below. So, these rates are periodically reviewed and amended by the government. So, these amendments to royalty rates are usually done once in every 3 year to just to maintain a stability in these rates. So, for example, say we have we first take the example of say diamond.

So, it is 11.5 percent of average sale price on ad valorem basis. Ad valorem means ah this is in proportion to the estimated value of the goods or transaction constant. That means, the value is depend because the diamond is not not having an absolute value like it depends on the cut clarity ah carat all these things. So, depending on that a small diamond may be very expensive.

So, based on their value if 11.5 percent will be charged as this thing your by the by you have to charge as royalty and it will be paid to the government. Now, the for example, dolomite here now it is fixed. So, this is 75 rupees per ton 75 rupees per ton dolomite flat. Now, in copper 45.62 percent of LME price, LME exchange price. So, from there

copper metal price can be found out from the London Metal Exchange website also, from there we can get the price.

Now, how do we find that out? When you produce copper ore, then we know the estimated grade. So, from there we can find out the metal in the ore—how much metal is contained in that ore. So, based on that value, say we have 1000 tons of copper, and then we know the value of copper from the LME, the London Metal Exchange.

So, based on that value, we take 45.62 percent of that value as royalty on the copper. So, it depends on the LME rate. If it falls or goes up, then accordingly the amount that has to be levied will change, but percentage-wise it is 45.62. The dead rent, which is stipulated in Section 9A, has been stipulated in this particular Third Schedule. So, the dead rent rates applicable to the leases granted for low-value minerals are as follows—this is for low-value minerals.

# THE THIRD SCHEDULE - Rates of Dead Rent (Section 9A)

1. Rates of dead rent applicable to the leases granted for low value minerals are as under:

Rates of dead rent in rupees per hectare per annum		
From second year of lease	Third year and fourth year of lease	Fifth year onwards
400	1000	2000

- 2. Two times the rate specified at paragraph 1 above in case of lease granted for medium value minerals.
- 3. Three times the rates specified at paragraph 1 above in case of lease granted for high value minerals.
- 4. Four times the rate specified at paragraph 1 above in case of lease granted for precious metals and stones.





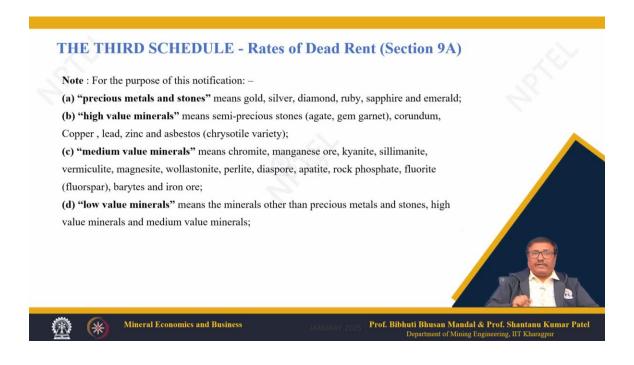


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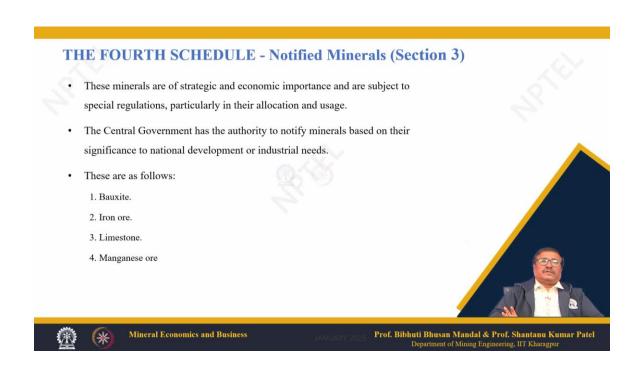
We will talk about low-value, medium-value, or high-value in the next slide. So, from the second year of the lease, you will pay 400 rupees per hectare per annum every year. For the third year and fourth year, please pay 1000 rupees per annum per hectare. Again, from the fifth year onwards, it becomes 2000.

Now, double this amount has to be paid for medium value minerals and 3 times of these rates will be paid for the high value minerals. 4 times of the rates specified at paragraph 1 above in case of lease granted for precious metals and stones. Now, how do we define these things precious metals means gold, silver, diamond, ruby, sapphire and emerald. Similarly, high value will mean semiprecious stones like agate, gem, garnet, corundum, copper, lead, zinc, asbestos all these things will come in under high value mineral accordingly the dead end has to be calculated. And you see the medium value minerals means chromite, manganese, kyanite, selenite all these things this manganesite what we see here rock phosphate, barytes, iron ore for this it is considered as a medium value mineral.



and low value means minerals other than the precious metals and stones high value minerals and medium whatever is remaining will be considered as low value and accordingly the rates of the dead rent that has been prescribed and of of course, I I have showed it in the previous slide that has to be calculated and the company has to pay accordingly. In the fourth schedule you see only four ah minerals have been listed here. These minerals are of strategic and economic importance and they are subject to special regulations, specially for their allocation and uses. So, the central government has the authority to notify minerals based on their significance to national development and

industrial needs. You see the bauxite is very very important, iron ore, the entire steel sector is dependent on this, which is very much related, very very closely related to the infrastructural growth.

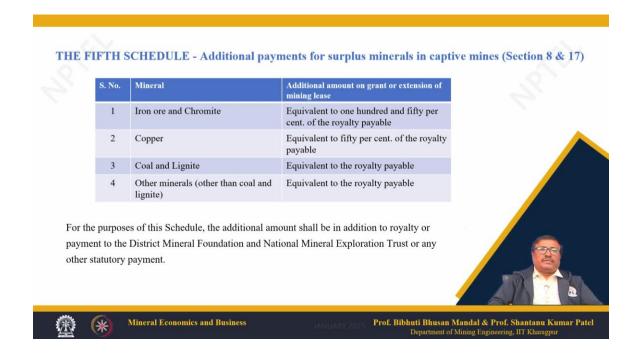


Limestone is related to your this thing, your cement production, which is again related to the development, infrastructural development throughout the country. manganese is very much related to the steel production, which is indirectly adding to the strength of steel the Manganese says manganese ore in their limited size. So, the iron ore and then steel production So, bauxite, iron ore, limestone, manganese ore are notified minerals. They are considered as very important strategic and economic importance.

That is why we have a separate schedule, and this is notified accordingly under section 3. In the fifth schedule, this is basically additional payments for surplus minerals in captive mines. That means, when additional amount is granted or extension of mining lease is given, this is for When you are extending the mining lease beyond the stipulated limit, then what do we do? We have to pay additional fees.

So, the additional amount shall be in addition to royalty or payment to the district mineral foundation or the NMET. This is a separate additional payment. Like equivalent to 150 percent of the royalty payable. That means, you are paying certain royalty, and if you are

getting an extension of the mining lease, you pay 150 percent additional royalty. Copper is also equivalent to 50 percent of the royalty payable.



Coal and lignite are equivalent to royalty payable. Whatever royalty that means, the 100 percent additional payment you have to make. When you are getting an extension of the mining lease beyond the prescribed one, then you have to pay additional. And this schedule, the fifth schedule, specifies the amount that has to be paid in addition to the stipulated amount. Now, for the sixth schedule, these are the conditions for sale of surplus minerals.

The sale of surplus minerals means for captive uses that is industries with their own mines, certain industries for say for cement plant, they have their own mine right, own mine. So, now, so usually we get a license specially for that we mine this and we do not sale outside. So, we consume this for the purpose of say cement production here or we produce iron ore and then we use this for steel production. But, we can sell now up to 50 percent of the annual production in the market after meeting internal requirements. So, we have fulfilled the internal requirement of our own plant, if I am having a license as a captive user and then we can sell up to 50 percent of the annual production that is that is allowed.

# THE SIXTH SCHEDULE - Conditions for sale of surplus minerals (Section 8)

- Sale of Surplus Minerals: Captive users (e.g., industries with their own mines) can sell up to 50% of their annual production in the market after meeting internal requirements.
- Additional Payments: The sale is subject to an additional payment specified in the Sixth Schedule.
- Amendment Powers: The Central Government can revise the percentage of surplus allowed or the additional payments through notifications.
- Exemptions: Certain mining leases, like those linked to power projects awarded on tariff-based bidding, are not allowed to sell surplus minerals.







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Now, additional payments the sale is subject to an additional payment specified in this schedule and the central government can revise the percentage as usual certain mining leases like those linked to power project awarded on tariff based bidding are not allowed that is fine. But this this has additional table or amount where we can of course, 50 percent we can sell up to 50 percent of the annual production after meeting the internal requirement and we have a rate that has to be paid. At that rate, we have to pay in addition to whatever we are supposed to pay. Now the condition of ah sale for sale of surplus mineral ah example for for coal which is for captive use of power generation.

# THE SIXTH SCHEDULE - Conditions for sale of surplus minerals (Section 8)

Example for Coal (Captive Use):

Provision	Details	
Maximum Sale Percentage	50% of annual production	
Additional Payment	As per Sixth Schedule; varies by grade	
Conditions	Internal requirements must be fulfilled first	

#### Significance:

- · Encourages efficient resource use by captive users.
- · Generates additional revenue for the government.
- Supports economic activities by supplying surplus minerals to the market.







# THE SEVENTH SCHEDULE - Minerals (Section 3 and 10)

- 1. Apatite.
- 2. Beryl and other beryllium bearing minerals.
- 3. Cadmium bearing minerals.
- 4. Cobalt bearing minerals.
- 5. Copper bearing minerals.
- 6. Diamond.
- 7. Gold.
- 8. Graphite.
- 9. Indium bearing minerals.
- 10. Lead bearing minerals.
- 11. Lithium bearing minerals.
- 12. Molybdenum bearing minerals.
- 13. Niobium bearing minerals. 14. Nickel bearing minerals.
- 15. Potash.

- 16. Platinum group of elements bearing minerals.
- 17. Minerals of 'rare earths' group,
- 18. Rhenium bearing minerals.
- 19. Rock Phosphate.
- 20. Selenium.
- 21. Silver.
- 22. Tantalum bearing minerals.
- 23. Tellurium bearing minerals.
- 24. Tin bearing minerals.
- 25. Titanium bearing minerals and ores (ilmenite, rutile and
- leucoxene).
- 26. Tungsten bearing minerals.
- 27. Vanadium bearing minerals.
- 28. Zinc bearing minerals.
- 29. Zirconium bearing minerals and ores including zircon.







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So, maximum sale percentage is 50 percent of say annual production, the additional payment as per 6 schedule that varies by grade that means, coal has different grade. So, there is a chart from where you can sale up to 50 percent, but then you have to pay an additional amount that is given in the 6 schedule. In the seventh schedule ah we have ah list of minerals which is used for the purpose of ah auction exploration through auction. This is a much later addition ah to the act and these are ah where the ah the list of the the minerals which goes through goes ah through auction for the purpose of exploration. And special provisions for there is atomic section under section 10 and section 11 talks about coal.

# Special Provisions for Atomic (Section 10) and Coal Minerals (Section 11)

- **Atomic Minerals:** 
  - Regulated under Part B of the First Schedule due to their strategic importance.
  - · Mining leases require approval from the Central Government.
- Coal and Lignite:
  - Allocation through competitive auctions for both captive and non-captive use.
  - Special provisions for government entities involved in coal mining.
- Amendments (2021):
  - · Flexibility introduced for coal mines to sell up to 50% of annual production in the open market after fulfilling captive requirements.







So, for atomic minerals, these are regulated under Part B of the first rule that you have seen, due to the strategic importance of uranium, thorium, and all these things. And mining leases require approval from the central government. Coal and lignite allocation is through competitive auctions for both captive and non-captive use. Competitive auctions are conducted through bidding, open bidding, open in the market. And when it comes to government entities—government companies involved in mining—they have special provisions for them.



The websites of the Indian Bureau of Mines and the Ministry of Mines are where we have taken these details, or you can read all the rules and regulations relevant to the mining industry. In the next part, in the next lecture, we will continue with the ore reserve classification and other topics. We will return later to certain parts of the rules and regulations, as by that time, we would have explained the topics. up to a level where the relevant rules can be understood much better by the participants attending this course. So, see you then. Bye bye.