

Open Peat Mining

Open peat mining, also known as surface or strip mining, is a method of extracting peat from the ground by removing the overlying vegetation and soil layers to expose the peat deposits. Peat itself is an accumulation of partially decayed organic matter, primarily from plants like mosses, which forms in waterlogged, acidic conditions known as bogs or mires over thousands of years. Historically, peat has been used as a fuel for heating and cooking, and today it is also widely used in horticulture as a soil conditioner and growing medium.

The mining process begins with the drainage of the bog to allow machinery access. The surface layer, or "overburden," is then removed. Large machinery, such as excavators and milling machines, is used to extract the peat, which is often left to dry in the sun before being collected and transported. This method is cost-effective and allows for the extraction of large volumes of peat relatively quickly.

However, open peat mining has significant environmental consequences. The drainage and removal of peat destroy unique wetland ecosystems, leading to habitat loss for specialized flora and fauna. It is a major source of greenhouse gas emissions, as draining peatlands releases the vast amounts of carbon dioxide stored in the peat. Furthermore, the landscape alteration is often severe and long-lasting, as natural peat bogs take millennia to form and cannot be easily restored.

Due to these impacts, many countries are now regulating peat mining more strictly, promoting the use of sustainable alternatives like coconut coir or composted bark, and investing in the restoration of degraded peatlands to recapture carbon and restore biodiversity.

Tasks for the Text

1. Answer the questions (6 questions).

1. What is another name for open peat mining?
2. What are the two main historical and modern uses of peat mentioned in the text?
3. What is the first step in the peat mining process?
4. Why is the peat often left on the ground after extraction?
5. What are two major environmental consequences of open peat mining?
6. What is one sustainable alternative to peat mentioned in the text?

2. True or False (6 statements).

1. Peat forms in dry, desert-like conditions.
2. Open peat mining is considered a slow method of extraction.

3. Draining peatlands for mining releases carbon dioxide.
4. The text states that peat bogs can be quickly and easily restored after mining.
5. Peat is used in horticulture.
6. The overburden is the layer of peat itself.

3. Fill in the blanks with a suitable word (7 sentences).

(Words for the blanks: fuel, drainage, habitat, milling, restoration, regulated, millennia)

1. Peat was traditionally used as a ___ for heating.
2. The initial stage of mining involves the ___ of the bog.
3. Specialized ___ machines are used to extract the peat.
4. Mining leads to the loss of ___ for many species.
5. Natural peat bogs form over ___.
6. Due to environmental concerns, peat mining is now more strictly ___.
7. There are projects aimed at the ___ of damaged peatlands.

4. Find English equivalents in the text for these phrases (10 sentences).

1. поверхностная добыча полезных ископаемых
2. скопление органического вещества
3. водонасыщенные условия
4. улучшитель почвы
5. снятие верхнего слоя почвы
6. эффективный с точки зрения затрат
7. последствия для окружающей среды
8. потеря среды обитания
9. выбросы парниковых газов

10. восстановление нарушенных земель

5. Make sentences from the mixed words (6 sentences).

1. peat / is / a / non-renewable / resource / slowly / forming / .
2. bogs / unique / are / ecosystems / fragile / .
3. releases / carbon / mining / long-term / stored / .
4. are / alternatives / sustainable / available / now / .
5. the / landscape / is / altered / severely / .
6. for / used / is / peat / germination / seed / often / .

Vocabulary List: "Open Peat Mining"

1. Peat [pi:t] – Торф.
2. Open / Surface / Strip mining – Открытый / Поверхностный способ добычи.
3. To extract [ɪk'strækt] – Добывать, извлекать.
4. Overlying vegetation [ˌəʊvə'laɪɪŋ ˌvedʒɪ'teɪʃn] – Покровная растительность.
5. Deposit [dɪ'pɒzɪt] – Месторождение, залежь, отложение.
6. Accumulation [əˌkju:mjə'leɪʃn] – Скопление, накопление.
7. Partially decayed [ˌpɑːʃəli dɪ'keɪd] – Частично разложившийся.
8. Organic matter [ɔː'ɡænɪk 'mætə(r)] – Органическое вещество.
9. Waterlogged [ˌwɔːtəlbɒgd] – Заболоченный, насыщенный водой.
10. Acidic conditions [ə'sɪdɪk kən'dɪʃnz] – Кислотные условия.
11. Bog / Mire [bɒɡ] / [ˌmaɪə(r)] – Болото, топь.
12. Fuel [ˈfjuːəl] – Топливо.
13. Horticulture [ˈhɔːtɪkʌltʃə(r)] – Садоводство.
14. Soil conditioner [sɔɪl kən'dɪʃənə(r)] – Улучшитель почвы, мелиорант.
15. Growing medium [ˌgrəʊɪŋ 'miːdiəm] – Субстрат для выращивания.
16. Drainage [ˈdreɪnɪdʒ] – Осушение, дренаж.
17. Overburden [ˌəʊvəbɜːdn] – Вскрыша, верхний слой почвы.
18. Excavator [ˈɛkskəvətə(r)] – Экскаватор.
19. Milling machine [ˈmɪlɪŋ mə'ʃiːn] – Фрезерная машина.
20. Cost-effective [ˌkɒst ɪ'fektɪv] – Экономически эффективный, рентабельный.
21. Environmental consequences [ɪnˌvaɪrən'menti 'kɒnsɪkwənsɪz] – Экологические последствия.
22. Wetland ecosystem [ˈwetlənd ˈiːkəʊsɪstəm] – Болотная экосистема.
23. Habitat loss [ˈhæbɪtæt lɒs] – Утрата / потеря среды обитания.
24. Flora and fauna [ˈflɔːrə ənd ˈfəʊnə] – Флора и фауна.
25. Greenhouse gas emissions [ˌɡriːnhaʊs ɡæs ɪ'mɪʃnz] – Выбросы парниковых газов.
26. To release [rɪ'liːs] – Высвобождать, выбрасывать.
27. Landscape alteration [ˌlændskeɪp ˌɔːltə'reɪʃn] – Изменение ландшафта.
28. To restore [rɪ'stɔː(r)] – Восстанавливать, рекультивировать.
29. To regulate [ˌregjəleɪt] – Регулировать.
30. Sustainable alternative [sə'steɪnəbl ɔːl'tɜːnətɪv] – Устойчивая альтернатива.
31. Restoration [ˌrestə'reɪʃn] – Восстановление, рекультивация.

32. Degraded peatlands [dɪ'greɪdɪd 'pi:tləndz] – Нарушенные / деградированные торфяники.

33. Biodiversity [ˌbaɪəʊdaɪ'vɜ:səti] – Биологическое разнообразие.

Word Families & Collocations:

- To mine peat – добывать торф.
- Peat extraction – добыча торфа.
- Peat bog / peatland – торфяное болото / торфяник.
- Carbon storage / carbon sink – хранение углерода / поглотитель углерода.
- Environmental impact / damage – воздействие на окружающую среду / экологический ущерб.
- Long-lasting effects – долгосрочные последствия.
- To mitigate damage – смягчить ущерб.