TURKU HANSDA LAPSA HEMRAM MAHAVIDYALAYA

(A Govt. Aided General Degree College affiliated to Burdwan University and registered u/s 2(f) & 12(B) of UGC Act. 1956)

Vill-Madian, Mallarpur
PIN 731216, West Bengal
Website-www.thlhmahavidyalay.ac.in

PO-Ganpur, Birbhum
Phone & Fax 03461-262175
email-tlmprincipal@gmail.com

Date:24/12/2023

Subject: Notice for Meeting on 02/01/2024

Dear Members,

This is to inform all EMVS Cell members that a meeting has been scheduled on **02nd January 2024** at **12.30 PM** in the **Principal's Chamber** to discuss the following matters:

1. Submission of Environmental Studies (ENVS) Projects for the current academic session.
2. Miscellaneous issues related to project evaluation and deadlines.

Your presence in the meeting is crucial to ensure smooth coordination and timely completion of the ENVS project submission process.

T.IC

T.H.L.H.M

Teacher-in-charge
THLH Mahavidyalay
Madian, Mallarpur, Gonpur
Birbhum Pin-731216

ENVS (VAC) Convener

T.H.L.H.M

ENVS.(VAC)Convener
T.H.L.H. Mahavidyalay

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04/01/2024

বিজ্ঞপ্তি

মহাবিদ্যালয়ের প্রথম সেমিস্টারের সকল ছাত্রছাত্রীকে (কলা ও বিজ্ঞান বিভাগ) জানানো যাচ্ছে যে তোমাদের Environmental Science/Education, VAC (Value Added Course) Compulsory- পেপারের Field Work Report/Project Report/ Term Paper নিম্নলিখিত তারিখে জমা নেওয়া হবে।

Date of Project Submission	Assigned Teacher	College Roll No of Student.
01/02/2024	Jayanta Kr. Barman	1-127(Arts) & 1-522(Science)
	Sanhita Samanta	128-304(Arts)
02/02/2024	Jayanta Kr. Barman	305-439(Arts)
	Monalisa Ghosh	440-588(Arts)
03/02/2024	Sanhita Samanta	589-754(Arts)
05/02/2024	Monalisa Ghosh	755-856(Arts)
06/02/2024	Jayanta Kr. Barman	857-992(Arts)
	Monalisa Ghosh	993-1035(Arts)

*প্রজেক্ট সংক্রান্ত বিষয়ে বিস্তারিত আলোচনার জন্য আগামী 16 ও 18 জানুয়ারি, 2024 স্পেশাল ক্লাসের ব্যবস্থা করা হয়েছে, উক্ত দিনে ছাত্র-ছাত্রীরা ক্লাসে উপস্থিত থেকে তাদের যাবতীয় জিজ্ঞাসার সমাধান করে নিতে বলা হচ্ছে ।

**নির্ধারিত দিনে প্রজেক্ট জমা না দিলে পরীক্ষার্থীকে অনুপস্থিত হিসেবে ধরা হবে ।

04/01/24
Suman Mukherjee
T.I.C
T.H.L.H Mahavidyaly.
Dr Suman Mukherjee
Teacher-in-Charge
Turku Hansda Lapsa Hemram Mahavidyalay
Mallarpur, Birbhum- 731216

04.01.24
Washim Raja
Co-ordinator, Exam Cell
T.H.L.H.Mahavidyalay
Convener
Exam Coordination Cell
THLH Mahavidyalay
Mallarpur, Birbhum

04.01.24
Jayanta Kumar Barman
ENVS. Convener
T.H.L.H.Mahavidyalay
ENVS.(VAC)Convener
T.H.L.H.Mahavidyalay

TURKU HANSDA LAPSA HEMRAM MAHAVIDYALAY

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Phone & Fax- 03461-262175
email-tlmprincipal@gmail.com

Students having ENVS Project (Session- 2023-2024)

4 Years Honours Course

Course	UR		SC		ST		OBC-A		OBC-B		Total		Grand Total
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
BNGH	2	9	2	1	-	1	-	6	-	6	4	23	27
ENGH	5	15	1	2	-	2	3	3	-	4	9	26	35
GEOH	1	10	1	3	-	1	1	-	1	2	4	16	20
HISH	4	7	2	2	2	-	-	1	-	1	8	11	19
PHIH	-	-	-	2	-	-	-	-	-	-	-	2	2
SNSH	1	1	2	1	-	-	-	-	-	-	3	2	5
SNTH	2	16	-	-	-	3	-	-	-	-	2	19	21
BAH total A	15	58	8	11	2	7	4	10	1	13	30	99	129
MTMH B	2	1	2	-	-	-	1	-	2	-	7	1	8
TOTAL (A+B)	17	59	10	11	2	7	5	10	3	13	37	100	**137**

3 Years General Course

Course	UR		SC		ST		OBC-A		OBC B		Total		Grand Total
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
BNGP	32	45	19	30	6	3	13	15	14	6	84	99	183
ENGP	5	7	2	2	-	-	1	1	-	-	8	10	18
GEOP	5	3	-	1	-	-	3	3	3	1	11	8	19
HISP	25	20	12	12	3	5	9	6	4	4	53	47	100
SNSP	16	22	12	14	2	6	2	7	3	2	35	51	86
SNTP	12	10	-	-	2	1	-	-	-	-	14	11	25
PHIP	17	24	16	13	1	7	7	2	4	2	45	48	93
PLSP	5	13	3	1	-	1	1	5	1	2	10	22	32
PEDP	13	5	10	6	3	3	1	1	5	4	32	19	51
BAP Total A	130	149	74	79	17	26	37	40	34	21	292	315	607
MTMP	-	1	-	-	-	-	-	-	-	-	-	1	1
PHSP	-	-	-	-	-	-	-	1	-	-	-	1	1
CEMP	2	-	-	-	-	-	-	1	-	-	2	1	3
BSP Total B	2	1	-	-	-	-	-	2	-	-	2	3	5
TOTAL (A+B)	132	150	74	79	17	26	37	42	34	21	294	318	612
4-Years & 3-Years GRAND TOTAL													**749**

Teacher-in-charge
THLH Mahavidyalay
Madian, Mallarpur, Gan
Bhum Pin- 731216

TURKU HANSDA LAPSA HEMRAM MAHAVIDYALAY

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Mallarpur, Birbhum, West Bengal, India, Pin- 731216

ENVS Project of Semester- I (2023-2024)

Certificate of Completion

This is to certify that RINA KHATUN **of THLH Mahavidyalay**

has completed the ENVS Project and submitted a project report, entitled

Renewable and Non-Renewable Sources of Energy

for the partial fulfillment of Semester I under the NEP syllabus.

Dr Suman Mukherjee **Teacher- in- charge**	**Dr Sk Nur Upsar** **Co-Ordinator, IQAC**	**Convenor, ENVS Sub-committee**	**Project Supervisor**

TURKU HANSDA LAPSA HEMRAM MAHAVIDYALAY

(A Govt Aided General Degree College affiliated to the University of Burdwan)

Mallarpur, Birbhum, West Bengal, India, Pin- 731216

ENVS Project of Semester- I (2023-2024)

Certificate of Completion

This is to certify that RAKESH DALUI **of THLH Mahavidyalay**

has completed the ENVS Project and submitted a project report, entitled

Some Medicinal plants & their Benifits.

for the partial fulfillment of Semester I under the NEP syllabus.

Dr Suman Mukherjee Teacher- in- charge	Dr Sk Nur Upsar Co-Ordinator, IQAC	Convenor, ENVS Sub-committee	Project Supervisor

TURKU HANSDA LAPSA HEMRAM MAHAVIDYALAY

Project Name :- Renewable and Nonrenewable Source of Energy

Academic Session : 2023 - 2024.

NAME :- SUCHITRA KONAI

CLASS :- B.A 1ST YEAR SEM-I

SUBJECT :- ENVS

UNIVERSITY REG. No. :-

COLLEGE ROLL :- 494

Guided By

Prof Monalisha Ghosh

15/01/24

THE UNIVERSITY OF BURDWAN

INTRODUCTION

A project about renewable and non-renewable energy sources can help students understand the difference between the two and identity them in their communities. Here or some things to consider when teaching about renewable and non renewable energy sources there are ..

* Sunlight
* Wind
* Tibes
* Geothermal
* Biomass
* Hydropower
* Tidal
* Coal
* Oil
* Natural gas
* Nuclear energy
* Hydrocarbon gas liquids.

Environmental input

Renewable energy sources have lower carbon emissions and carbon footprints than non-renewable energy sources. Burning fossil fuels to produce energy causes harmful greenhouse gas emissions, such as carbon dioxide.

Cost

Renewable energy has a higher upfront cost than non-renewable enegy. However, renewable are now cheaper in most countries.

Infrostructure

Infrostructure for hervasting energy is expensive and not easily accessible in most countries. Non renewable energy has more cost effective and accessible infrostructure.

* They are replaced by nature in a short period of time.
* They are sustainable and environmentally friendly.
* The rate at which resources get consumed does not affect its availability ore restoring capacity.
* The majority of renewable resources emit little carbon and have a small carbon foot point.
* Renewable energy has a high inital cost. For example. creating power with renewable energy technologies is more expensive than generation it fossil fuels.
* Renewable energy infrostructure is unreasonally and difficult to get in most nations.
* Sunlight, water, wind and geathernal sources like hot springs and fumaroles are all renewable resources.

Non-renewable energy sources

Non-renewable energy sources are those which have a limited stock. Once the stocks are exhausted it may take thousands of years to be renewed or replenished. Since this period is resources are considered non-renewable. Coal petroleam and natural gas are some examples.

Natural Resources

* All of the Earth's organisms, air, water and soil, as well as materials such as oil, coal and ore that are removed from the ground.
* Separated into two broad categories:
    1. Renewable resources
    2. Nonrenewable resources.

Renewable Resources

* Are any resource that cycles or can be replaced within a human life span.
* Examples include: Water, crops, wind, soil, sunlight, Animals, etc.....

a. Food and fiber

are renewable agricultural resources that can be harvested or raised indefinitely.....

b. soil a mixture of living organisms and dirt. Even though it initially takes thousands of years to form, the rate at which soil can regenerate depends of the climate of an area.

c. Wind caused by the uneven heating of the Earth Not only renewable but inexhaustible

d Sun light from the sun the supports all the life on Earth as we know it Also considered inexhaustible

e. Water constantly renewed / replenished by the water cycle

However, fresh water resources are somewhat limited

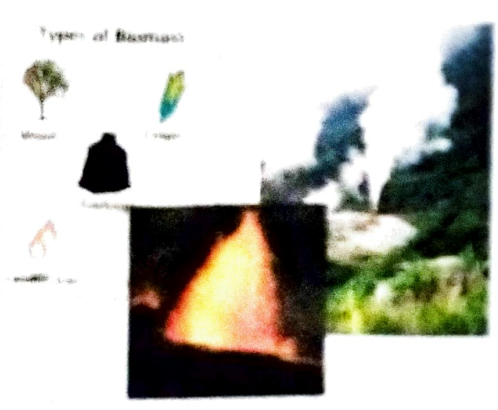
The use and quality of water must be carefully monitored to ensure future use

f Biomass fuels are organic matter that contain stored solar energy

Used to supply energy to 15 / of the world's supply

g Geothermal energy - the heat generated deep within the Earth

Fueled by the decay of radio active elements. Used to heat water



Nonrenewable Resouress

* Any resource that cannot be replaced during the time of a human life span.
* Took thousands of years of form and exist in fixed amouts in the Earth.
* they need to be conserved before they become depleted.

a. Ores - mineral deposits from which valuable metals and non-metals can be recovered for profit.

Metallic Ores include:
gold, silver, copper, aluminum, zinc, etc....

Nonmetallic ores include: salt, sand, gravel, clay, diamonds, gemstones etc....

Currently there are no metal mines in operation in PA.

The major nonmetallic ores mined are coal, limestone, granite, slate, sand, and gravel.

b. Fossil Fuels

* Are nonrenewable because they take thousands of years to form.
* In developing countries, the fossil fuels are fossilized wood, charcoal and peat.
* In developed countries, the fossil fuels are mailly coal, natiral gas and oil.

(i) Coal - The remains of wetland plants that have been compressed over millions of years

Different types —

* Peat : about 50% carbon. The rest is water and contaminants

* Lignite : about 70% carbon

* Bituminous - about 85% carbon.

* Anthracite - greater than 90% carbon. This is the cleanest burning and least abundant.

* Most of the coal fields in Western PA are bituminous coal whereas the coal field in Eastern PA are anthracite.

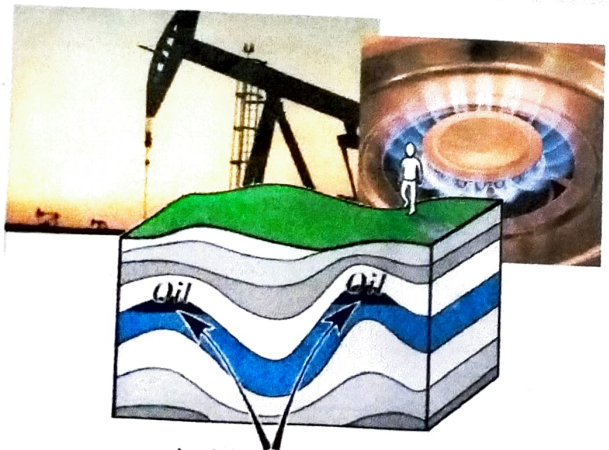
* Russia produces about 50% of the world's supply of coal. China produces about 20%. The U.S. Produces about 15% of the world's supply.

(ii)

Petroleum and Natural Gas: are the remains of mainly marine organisms.

* Typically found in Underground formations called traps with the natual gas trapped on top and oil on the bottom.

* Currently, PA does not produce significant amounts of oil and gas but the beginning of the U.S. oil boom in the 1800's started in Titusville, PA.



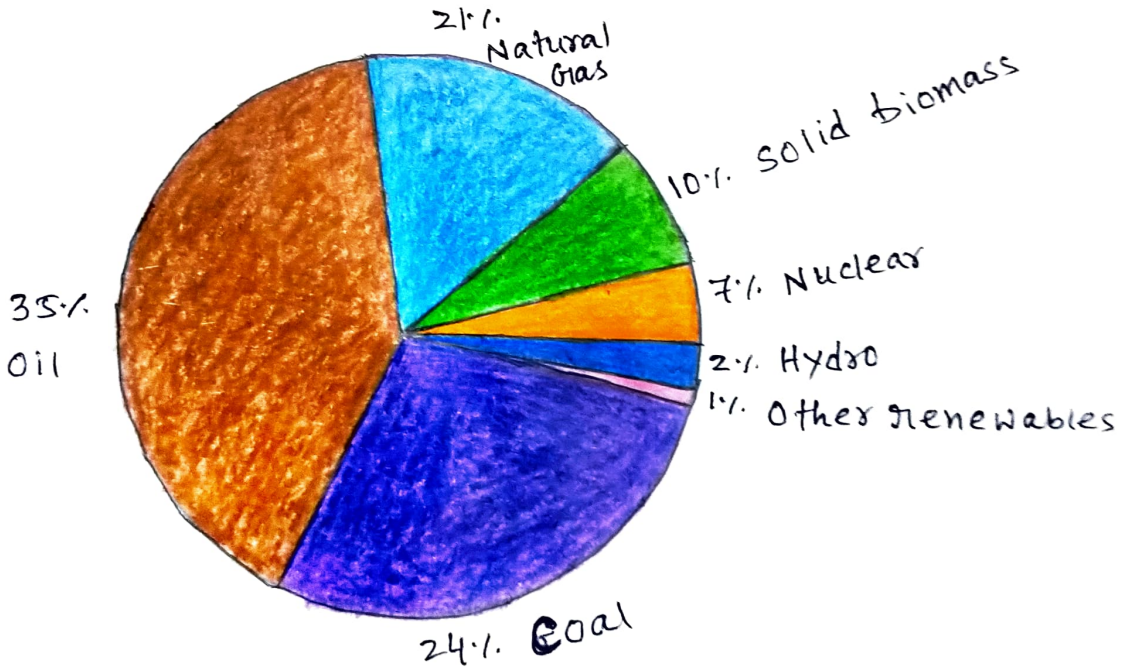
Anticline Traps

Global Energy use and Production

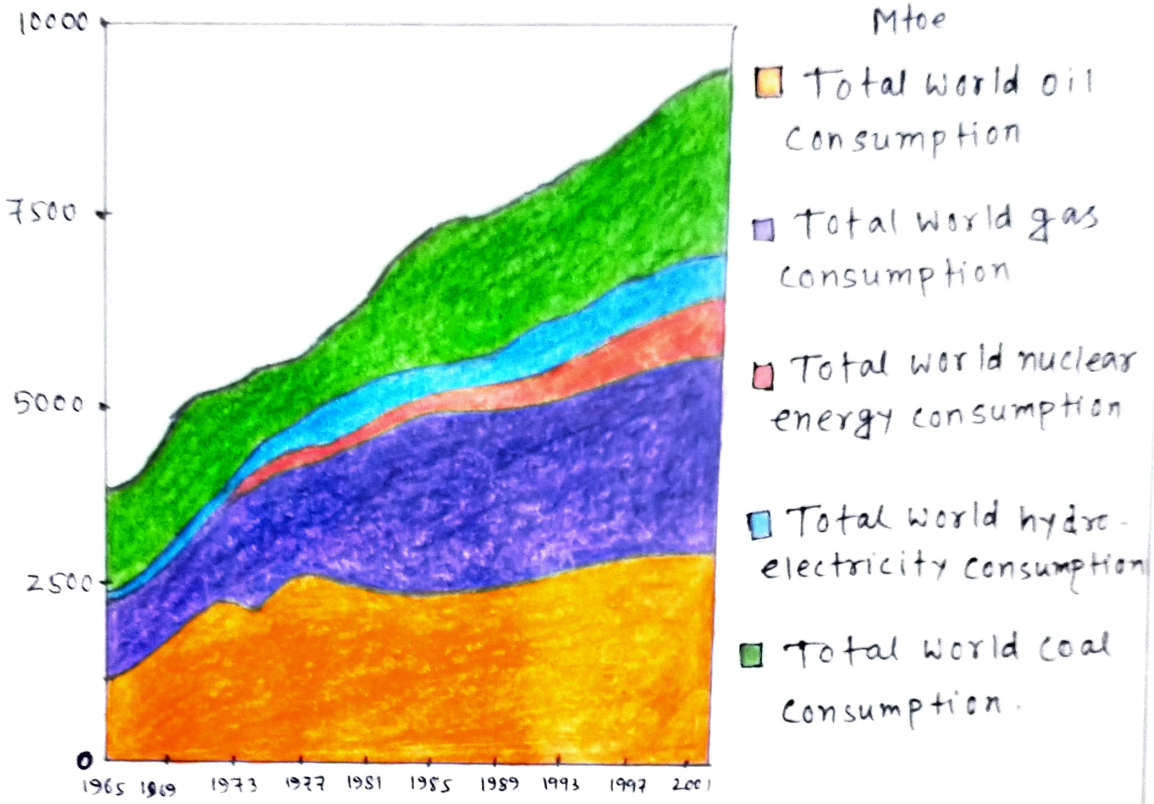
* Energy consumption increased by 50% from 1973-1993

* Expected to continue to increase in the future mainly in developing or third World Countries.

- Global Energy consumption by Source ⇨



Source: Earth Trends : WRI



* Remember that using more fossil fuels accelerates the global warming trend due to more greenhouse emissions and pollution.

* What other effects will a growth in global energy use produce?

Alternative Energy Resources.

(a) These are energy resources that are more renewable or more environmentally friendly in comparison to fossil fuels.

(b) Currently include the following: solar, wind, geothermal, hydropower, nuclear and biomass.

i. Solar energy - can be used to heat buildings and water and provide electricity.

* Passive solar heating uses large south facing windows to collect the sun's energy.
* Solar cells can collect and convert the sun's energy into electricity for residential use.

ii. Wind - turns giant wind turbines that produce electricity.

* currently, there are about two dozen wind turbines in PA.

* Several are located in Somerset, PA near the turnpike.

iii. Hydropower - the energy of water stored behind dams can be turned into electricity.

* Currently, there are 23 dams in PA that produce electricity.

iv. Nuclear power - uses the process of fission to release energy to make electricity.

* produces about 20% of the electricity in the U.S.

* Currently, PA has five nuclear power plants. Beaver Valley, Susquehanna, Three Mile Island, Limerick and Peach Bottom.

* In 1979, there was a partial reactor meltdown at Three mile Island. This brought a halt to nuclear development in the U.S. There have been no new plants since.

Courtesy of The National Renewable Energy Laboratory (NREL)

TURKU HANSDA LAPSA HEMRAM MAHAVIDYLAY

NAME :- SIMA MONDAL

COLLEGE ROLL :- 945

2023 – 2024.

SUBJECT :- VAC (ENVS)

PROJECT TOPIC :- PROJECT ON RENEWABLE AND NON-RENEWABLE SOURCE OF ENERGY

By
16/07/24

GUIDE TEACHER NAME :- Dr. MONALISA GHOSH

G Ghosh

Introduction

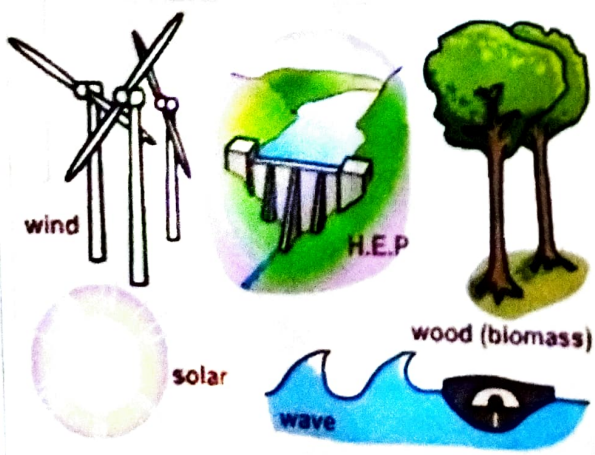
Humans have invented various technologies for harnessing the energy that we use for powering many of the things around us. some of those sources of Power are renewable and Others are not.

Natural Resources

- All of the Earth's organisms, air, water, and soil, as well as materials such as oil, coal, and ore that are removed from the ground.

- Separated into two broad categories:
  - Renewable resources
  - Non-Renewable resources

Renewable Resources



- Are any resource that cycles or can be replaced within a human life span.
- Examples include

water, crops, wind, soil sunlight animals, etc....

a) Food and fiber

Are renewable agricultural resources that can be harvested or raised indefinitely ...

.... unless their use exceeds the rate they can be replaced.

b) Soil

A mixture of living organisms and dirt.

Even though it intially takes thousands of years to from, the rate at which soil can regenerate depends on the climate of an area.

c) wind

Caused by the uneven heating of the Earth. Not only renewable but inexhaustible.

d) Sun

Light from the sun supports all the life on Earth as we know it. Also considered inexhaustible. (at least for the next 5 billion years)

e) Water

Constantly renewed / replenished by the water cycle.

However, fresh water resources are somewhat limited.

The use and quality of water must be carefully monitored to ensure future use.

f) Biomass fuels

Are organic matter (wood, plants

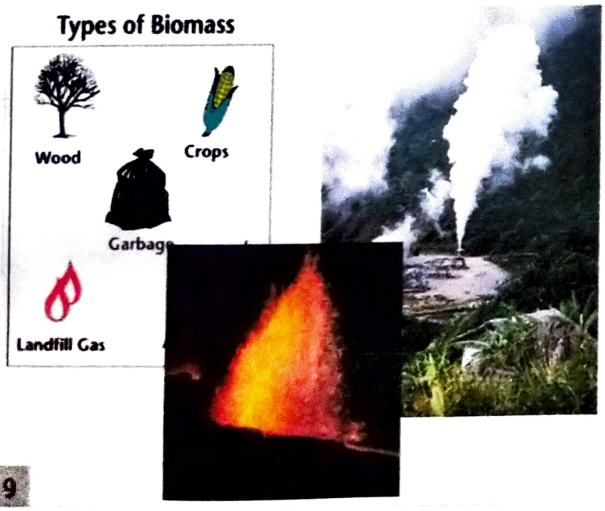
animal residues, etc...) that contain stored Solar energy.

Used to supply energy to 15% of the world's supply.

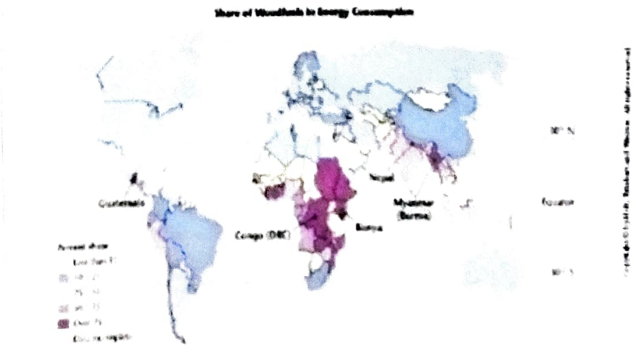
g) Geothermal energy

The heat generated deep within the Earth.

Fueled by the decay of radioactive elements.
Used to heat water.



World Use of Woodfuels



Non-Renewable Resources

- Any resource that cannot be replaced during the time of a human life span.
- Took thousands of years to form and exist in fixed amounts in the Earth.
- They need to be conserved before they become depleted.

a) **Ores**

Mineral deposits from which valuable metals and nonmetals can be recovered for Profit.

Metallic ores include

gold, silver, copper, aluminum, zinc, etc....

Nonmetallic ores include

salt, sand, gravel, clay, diamonds, gemstones, etc....

currently there are no metal mines in operation in PA.

The major nonmetallic ores mined are coal, limestone, granite, slate, sand, and gravel.

b) Fossil Fuels

- Are non-renewable because they take thousands of years to form.

- In developing countries, the fossil fuels are fossilized wood, charcoal, and peat.

- In developed countries, the fossil fuels are mainly coal, natural gas, and oil.

i) Coal

The remains of wetland plants that have been compressed over millions of years.

Different types ——

- **peat**

About 50% carbon. The rest is water and contaminants.

- **Lignite (brown coal)**

About 70% carbon.

- **Bituminous (soft coal)**

About 85% carbon.

- **Anthracite (hard coal)**

greater than 90% carbon. This is the cleanest burning and least abundant.

- Most of the coal fields in Western PA are bituminous coal whereas the coal fields in Eastern PA are anthracite.

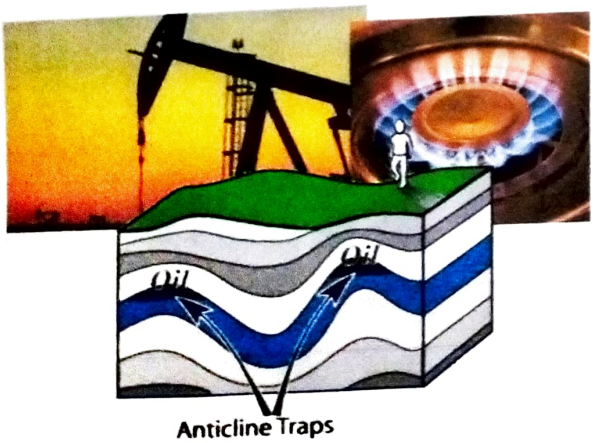
- Russia produces about 50% of the world's supply of coal. China produces about 20%. The U.S. produces about 15% of the world's supply.

ii) Petroleum and Natural Gas

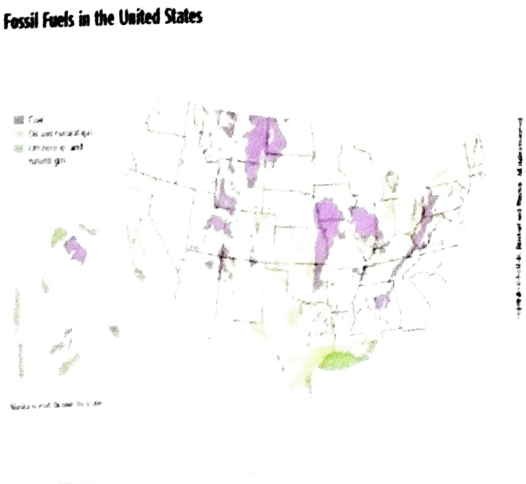
Are the remains of mainly marine organisms.

- Typically found in underground formations called traps with the natural gas trapped on top and oil on the bottom.

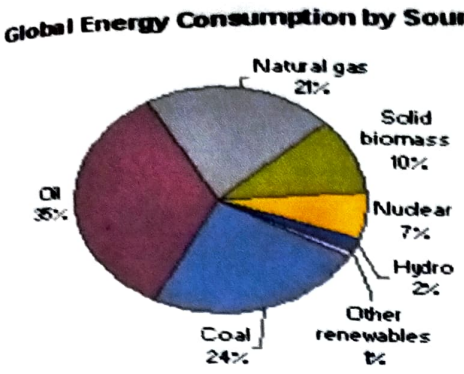
- currently, PA does not produce significant amounts of oil and gas but the beginning of the U.S. oil boom in the 1800's started in Titusville, PA.



Anticline Traps

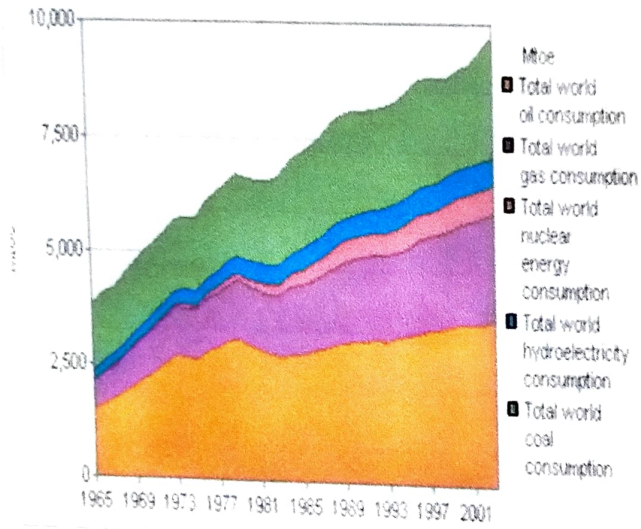


Global Energy use and production



- Energy consumption increased by 50% from 1973 - 1993.

- Expected to continue to increase in the future mainly in developing or third world countries.



- Remember that using more fossil fuels accelerates the global warming trend due to more greenhouse emissions and pollution.

- What other effects will a growth in global energy use produce?

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Those giant wind turbines that Produce electricity.

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The energy of water stored behind dams can be turned into electricity

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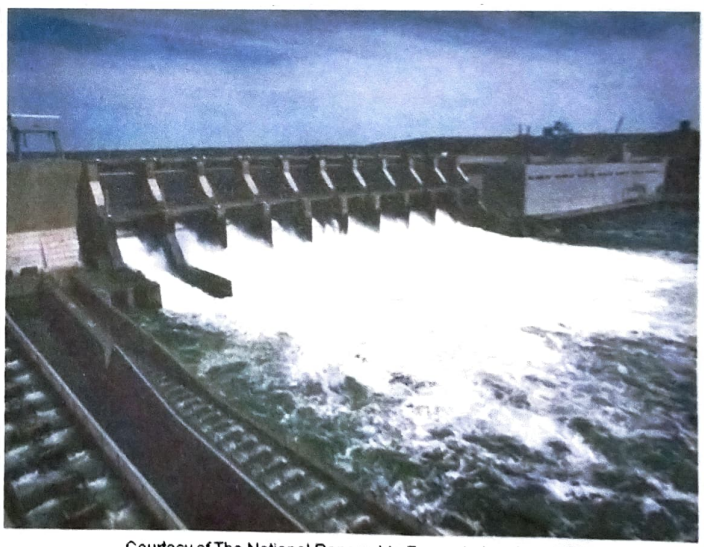

Courtesy of The National Renewable Energy Laboratory (NREL)

Completing my value added course on "Renewable and Non renewable energy" thanks to the support of Jain University. Particularly to my project guide Dr. Monalisa Ghosh whose guidance was instrumental and encouraging in the project planning.

This project has deepened my knowledge of environmental issues and has motivated me to contribute to positive change.