

ISLAM & THE ENVIRONMENT

TEACHER & CLASSROOM RESOURCE PACK

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I. Modern Problems

Production Oriented Technology

- The Profit Motive and short term thinking
- Depletion of Resources
- Supplying/Creating Demands

Waste Products

- Industrial
- Agricultural
- Individual

Weaponry

- Nuclear, chemical, and biological stockpiles
- The environmental effects of machine guns and mines

Population Growth

- Landholding patterns
- Urbanisation
- Famine

II. Modern Views

Holistic View of Environment

- Everything affects everything else
- Nothing operates in isolation
- Gaia Theory

Resource Management

- Variety of plant and animal kingdoms
- Each organism occupying its own niche
- Each having a particular role to play
- Recycling and Redistribution of Resources

Limiting factors of Ecosystems

- Minimal life requirements for organisms in ecosystem
- The Operating Parameters of ecosystems for specific organisms

Carrying capacity of Ecosystems

- Systems inability to sustain only a given amount of life

Development & Stability of Ecosystems

- Value of Time in ecosystem development
- Soil, water, coal, oil, rainforests

The Group & the Individual

- Distinction between needs of population and individual desires

III. Islamic Environmental Principles

Tauhid

The foundation stone of Islam.

Unity of God, recognition that there is only One, Absolute, Transcendent Creator of the Universe and all it contains. Man is responsible for his actions to God. God is the only source of all values.

Ali Shariati - "in the world view of Tauhid man fears only one power, and is answerable before only one judge. He turns to only one qibla, and directs his hopes and fears to one source. And the corollary is that all this is false and pointless, all the diverse and variegated tendencies, strivings, fears, desires and hopes of man are vain and fruitless. Tauhid bestows upon man independence and dignity. Submission to God alone - the supreme norm of all being - impels man to revolt against all lying powers, all the humiliating fetters of fear and greed."

Tauhid is all pervasive, penetrating all aspects of human thought and behaviour - It is the guiding principle of Islamic science, and at the centre of a muslim's curiosity with regard to nature.

From Tauhid emerge the concepts of Khilafa and Amana

Khilafa and Amana

Rationale of Islamic environmental ethics based on concept of Khilafa, man's viceregency or stewardship. The earth is an Amana, a trust from God. Man is trustee with responsibility for looking after creation.

The denial of absolute sovereignty to man automatically invests him with moral responsibility.

'Ilm

With an acceptance of the trust man recognises his freedom to choose. Nature becomes man's testing ground. He is enjoined to read nature's signs which reflect both man's position in nature and the Glory of God.

Nature is created "orderly and knowable". The orderliness of nature and its amenability to rational enquiry are a prerequisite for morality. The concept that regulates the reading of nature's signs is 'Ilm - Knowledge

The pursuit of knowledge cannot be separated from morality. 'Ilm operates through the agency of Tauhid - knowledge is pursued for the glorification of God and to fulfill man's obligation towards His trust.

The concepts of Tauhid, Khilafa, and 'Ilm are interconnected and shape the concerns and direction of rational inquiry. Islamic conceptual systems are therefore unreservedly and uncompromisingly "holistic".

IV. Shariah and Islamic Values

Halal & Haram

Islamic environment is controlled by two concepts Halal, that which is beneficial, and Haram, that which is harmful.

Other Islamic concepts

'Adl - Justice

Istihsan - Preference for the better - Equity and Justice as defined by God to determine law

Istislah - Seeking what is correct - Public and individual good to be the criterion for developing law

Mizan - Balance and equilibrium

Shariah

In Islamic traditions these principles are considered, emphasising the complete life experience of man. The value systems required to co-exist in harmony with one's biosphere are often codified in the Shariah based on references from Quran giving guidance on value systems and the underlying concepts on which they are based.

Conceptual framework is only the tip of an iceberg. The ecological concerns of Islam are given shape in the Shariah.

With acceptance of trusteeship comes acceptance of Divine Judgement.

Shariah is a "value-centred" system existing to realise the values inherent in the Islamic conceptual base.

The system of values on which the Shariah is based provides an ideal framework for a theory of environment, but at the moment, the environmental dictates of the Shariah can almost nowhere be seen as a living form extended to cover contemporary and future problems. It is a challenge to muslim countries to live up to.

V. Management of Resources

Divine Ownership

In Shariah, ownership of land and natural resources belongs ultimately to God, before whom even kings can only be vicegerents

Natural Resources

Prophet said:- "Whoever brings dead land to life, for him is a reward in it, and whatever any creature seeking food eats of it shall be reckoned as charity from him."

"There is no muslim who plants a tree or sows a field, and a human, bird or animal eats from it, but it shall be reckoned as charity from him."

Prophet established inviolate zones around water-courses utilities and cities - like a green belt where you couldn't build or develop.

Living Resources

Prophet forbade his followers from harming animals.

In Shariah all animals have legal rights on the state, as wildlife and natural resources have rights.

Shariah has a category "Hima" which are reserves to safeguard the rights of wildlife and forest.

VI. Conservation of Elements

Four elements

Air – workpack suggestions appended

Water - workpack suggestions appended

Earth - workpack suggestions appended

Fire - workpack suggestions appended

Four qualities

Hot, cold, wet, dry

Fire - Hot and dry

Earth - Cold and dry

Water - Cold and wet

Air - Hot and wet

Elements used to purify each other

Fire - Distillation of water and purification of metals

Water - Washing surfaces and leaching out salts

Earth - Filtration beds and scouring powders

Air - Winnowing grain and hospital ventilation

Interaction with life

Vegetation transforming noxious chemicals and gases

VII. The Three Kingdoms

Global Interactions

Geology, Hydrology, Archeology

The Mineral Kingdom

Mineralogy, Chemistry, Metallurgy, Alchemy

The Vegetable Kingdom

Botany, Pharmacology

The Animal Kingdom

Zoology, Anatomy, Physiology, Ophthalmology, Surgery, Dentistry

VIII. Humankind

War

Jihad not war but struggle
Greater and lesser jihad
Jihad of Argument & Quran
Jihad of Communication & example

Conditions that permit war
Self defence or invasion
Tyranny & injustice
Breaking of treaties

Parameters of war
No women or children or old men
No tree cutting
No water poisoning
Stop when enemy stops

Industrial Materialism

The possibility of Sustainable Growth

Societal awareness

Group necessities take precedence over individual desires

IX. Relevant Quotations from Qur'an & Hadith

X. Book & Magazine Extracts

Workpack suggestions – AIR

The Winds

In between the earth and sky
the winds are turning round,
spreading pollen in the flowers
and seeds across the ground,
Pushing round the clouds above,
swirling in the fallen leaves,
scattering the bonfire ashes,
blowing smells upon the breeze,
Carrying us across the sea,
smoothly sailing us home again,
the winds that blew for Solomon,
heralding new life with rain.

But gentle summer winds can swiftly
turn to winter's gales that freeze,
drowning ships in giant waves,
destroying houses, felling trees.
When we see the trees uprooted,
do we see how weak we are
compared to air that moves about us
by the power of Allah.
Is what sweeps us off our feet
bringing mercy to the land.
In the turning of the winds
are signs for those who understand.

QURAN REFERENCES

2.164 / 15.22 / 30.46 / 18.45 / 14.18 / 51.41 / 12.94 / 42.33 / 21.81 /
38.36 / 34.12 / 7.57 / 3.117 / 100.22 / 17.69 / 54.19 / 22.31 / 25.48 /
27.63 / 45.5

IN BETWEEN THE EARTH AND SKY
THE WINDS ARE TURNING ROUND

2.164 in the turning about of the winds and the clouds compelled between the heaven and earth are signs for people having understanding

Turning motion of winds

Cyclones and Anticyclones
Cloud Trails
Weather Maps

SPREADING POLLEN IN THE FLOWERS
AND SEEDS ACROSS THE GROUND

15.22 And We loose the winds fertilising

Fertilising wind

Windborne seeds
Dandelions and Thistledown
Windborne Pollen
Pollen Counts

PUSHING ROUND THE CLOUDS ABOVE
SWIRLING IN THE FALLEN LEAVES

35.9 God is He who looses the winds that stir up clouds, then We drive it to a dead land and therewith revive the earth after it is dead

30.46 God is he that looses the winds that stir up clouds, and He spreads them in Heaven how He will, and shatters them

18.45 and in the morning it is straw the winds scatter

Clouds and revivification of earth

Cloud types and internal motion
Cloud patterns in mixed liquids
Rain, hail, sleet and snow
Growth from seeds
The Serengeti rain cycle
The blooming of the desert after rain

Scattering straw

Tumbleweed
Swirling leaves
Mulch

SCATTERING THE BONFIRE ASHES
BLOWING SMELLS UPON THE BREEZE

14.18 The likeness of those who disbelieve in their Lord, their works are as ashes whereon the wind blows strong on a tempestuous day

51.41 And also in Ad, when We loosed against them the withering wind that left nothing it came upon, but made it as stuff decayed

12.94 So, when the caravan set forth, their father said, "Surely I perceive Joseph's scent"

Bonfire ashes

Ashes in updraft and spread on breeze - chimneys
Ashes blown to dust and vanishing

Withering wind

Sulphur dioxide, acid rains and air pollution
Infectious diseases, Plague winds, Chernobyl
Halabje and chemical weapons

Smells

Joseph's scent
Pheromones
Butterfly scents travelling miles
Bloodhounds tracking through manured fields
Pleasant and unpleasant smells, which is which and why
Mineral, vegetable, and animal smells
Musk and Elephant Manure

CARRYING US ACROSS THE SEA
SMOOTHLY SAILING US HOME AGAIN

42.33 And of His signs are the ships that run on the sea like landmarks; and if He wills, He stills the wind, and they remain motionless on its back.

Ships

Types of sail around the world
Different sails for different conditions
Travels of muslim sailors
The trade winds
The doldrums

THE WINDS THAT BLEW FOR SOLOMON HERALDING NEW LIFE WITH RAIN

*21.81 And to Solomon the wind, strongly blowing, that ran at his command
unto the land*

*38.36 So We subjected to him the wind, that ran at his commandment, softly,
wherever he might light on*

*34.12 And to Solomon the wind, its morning course was a months journey,
and its evening course was a months journey.*

*7.57 It is He who looses the winds, bearing good tidings before His mercy, till,
when they are charged with heavy clouds, We drive it to a dead land and
therewith send down water, and bring forth therewith all the fruits. Even so
we shall bring forth the dead; haply you will remember.*

Solomon and the winds

Story of Solomon and Sheba

Winds revivifying

Fruiting and reproduction
Types of fruit and seed contents
The life cycle

The breath of life

Plant and animal breathing
Our last breath
Life after death

BUT GENTLE SUMMER WINDS CAN SWIFTLY TURN TO WINTER'S GALES THAT FREEZE

*3.117 The likeness of that they expend in this present life is as the likeness of
a freezing blast that smites the tillage of a people who wronged themselves,
and it destroyed that*

Freezing blasts

Windchill factors
Windblown crops
Emperor penguins in Antarctica

DROWNING SHIPS IN GIANT WAVES
DESTROYING HOUSES, FELLING TREES

10.22 It is He who conveys you on the land and the sea; and when you are in the ship - and the ships run with them with a fair breeze, and they rejoice in it, there comes upon them a strong wind, and waves come on them from every side, and they think they are encompassed; they call upon God, making their religion his sincerely: "If You deliver us from this, surely we shall be among the thankful."

17.66/69 And when He delivers you to land, you turn away; man is ever unthankful.....Or do you feel secure that He will not send you back into it a second time, and loose against you a hurricane of wind and drown you for your thanklessness

Storms at sea

Wave sizes and tsunamis
Bravado and forgetfulness
Fear of death focussing the mind and restoring proportion

WHEN WE SEE THE TREES UPROOTED
DO WE SEE HOW WEAK WE ARE

54.19 We loosed against them a wind clamorous in a day of ill fortune continuous, plucking up men as if they were stumps of uprooted palm trees.

Wind noises

Blowing against our ears
Wind through hills and valleys
Wind around tower blocks
Wind in the trees and leaves
Flapping sailcloth or clotheslines
Singing telephone wires
Wind chimes and flutes
Wind instruments and brass bands

Story of Ad

(Qur'an 41.16 / 46.24 / 69.6)
Hurricanes and whirlwinds
Wind damage to buildings, bridges, trees and people

COMPARED TO AIR THAT MOVES ABOUT US
BY THE POWER OF ALLAH.

22.31 For whoever associates with God anything, it is as though he has fallen from heaven and the birds snatch him away, or the wind sweeps him headlong into a place far away.

Windpower

Windmills
Kites

The wind in the Battle of the Trench

(Qur'an 33.9)

Airborne creatures

Birds and insects
Sinbad and the Roc
Animal gliders
Hang gliders and parachutes
Balloon races

IS WHAT SWEEPS US OFF OUR FEET
BRINGING MERCY TO THE LAND

25.48 And it is He who has loosed the winds, bearing good tidings before His mercy

27.63 He who guides you in the shadows of the land and the sea and looses the winds bearing good tidings before His mercy. Is there a god with God? Little indeed do you remember.

Changing winds herald change of weather

Rain as a symbol of mercy
Shakespeare's quality of mercy

IN THE TURNING OF THE WINDS
ARE SIGNS FOR THOSE WHO UNDERSTAND

45.5 And in the turning about of the winds, there are signs for a people who understand.

The signs of God

Centrifugal and centripetal forces
Earth and clouds from satellite
Winds on Jupiter
Solar winds
Spiral galaxies

POSTSCRIPT

30.51 But if We loose a wind, and they see it growing yellow, they remain after that unbelievers

Consider the yellow photochromic pall hanging over Los Angeles and other cities.

SOME ILLUSTRATIONS

Windmills in Khurasan
Windtowers in Iran and Cairo
Projecting latticed window in Cairo

Workpack suggestions – WATER

Apparent rarity in the galaxy

- Restrictive temperature requirements
- The watery planet
- Water and Life on Earth

Sustaining Life & Cleansing

For Humankind

- Water content in composition of the body
- Absorption through digestive system

 - Mother's milk

 - The need for clean water

 - Waterborne diseases

 - How to clean water

- Balancing body salts etc.

 - pH-values

- Temperature control through evaporation

 - Perspiration

 - Refrigeration

 - Heat retention

 - Solar panels

 - Central heating

- Lubrication by tears and spittle

- Poisonous waste extraction and disposal

 - The urinary system

- Washing and personal hygiene

 - Body odours

 - Turkish baths

Wudhu

- The principles of Wudhu

- No scientific justification required

 - Intrinsic to five pillars

 - The acceptability of Tayyamum

- Distinction between poisonous and wholesome

 - Not innate knowledge

 - Infants eat excrement

 - Permitted animal foodstuffs

 - Cowpats, dead sheep and BSE

 - Insecticides and the Food chain

 - Toilet training

- Isolation and purification of poisonous wastes

 - Toilet and sewage systems

 - Industrial and Agricultural wastes

- Provision and purification of water

 - Wells, reservoirs and water systems

- Mosque facilities

- Description of the Wudhu

For the Planet

The global water cycle in the Quran

Seas evaporating

Clouds condensing

Rain falling

Polar and altitude icecaps

Ground water

Springs and streams

Rivers flowing

Lakes and seas

Waves and currents

Sweet and salt waters

Food from the seas and rivers

Herring, Salmon and Trout

Plankton geometry

Whales sharks and cuttlefish

The seaweed forests

Crops and irrigation systems

Aqueducts and qanat wells

Water lifting systems

Waterborne plant food

Rice paddies

Water cleaning of earth

Rain cleaning city streets

Leaching of chemicals and radiation from fields

Floods

Noah

Rivers used for waste disposal

The Ganges

Waste dispersal and transformation in the sea

Water power

Waterfalls

Wave power

Tide power

Water wheels

Dams

Hydraulics

Water clocks

SOME ILLUSTRATIONS

Water wheels in Syria

Water clock from Morocco

Qunut wells in Iran & Afghanistan

Camel driven water-wheel Turkmenistan

Water raising machinery in Egypt

Nilometer

Reservoirs and water distributions systems – Tunisia, Morocco

Workpack suggestions – EARTH

Mountains valleys and plate tectonics

Tayammum

- Purification by earth
- Requirements for clean earth
- Description of actions

Man made of clay

- Properties of clay
- Story of Adam

Breakdown and decomposition

- Mulch
- Manure, privies and sewage disposal
 - The Nitrogen cycle
 - Recent chemical fertiliser buildup
- Burial of the dead

Land ownership and tenure

- Public and private land
- The need for land use
 - Mining coal, ores, precious metals and gems
 - Agriculture and pasturage
- Sustainability of traditional Shariah grazing rights
- Forest and wildlife reserves

The requirements of land stewardship

Workpack suggestions – FIRE

Friction burns

Chemical combustion

Phosphorus & spontaneous combustion

Volcanoes & Hot springs

Solar energy

Atomic energy

Petrol combustion

Global Warming

Dresden & Nagasaki

Destruction of Kuwait Oil Wells

Fires of Hell