

# **EARTH HEALTH**

Unified Theory and Practical System  
for Healing Humanity and the Planet

**2024**

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Gaiazyme Enterprises

# INTENTION

## **BEAUTY**

Health  
Truth  
Mystery

## **LEVITY**

Love  
Light  
Divinity

## **UNITY**

Coherence  
Resonance  
Harmony

## **MUSE**

Discover  
Inspire  
Grow

## **MUSEUM**

Document  
Educate  
Home

## **MUSIC**

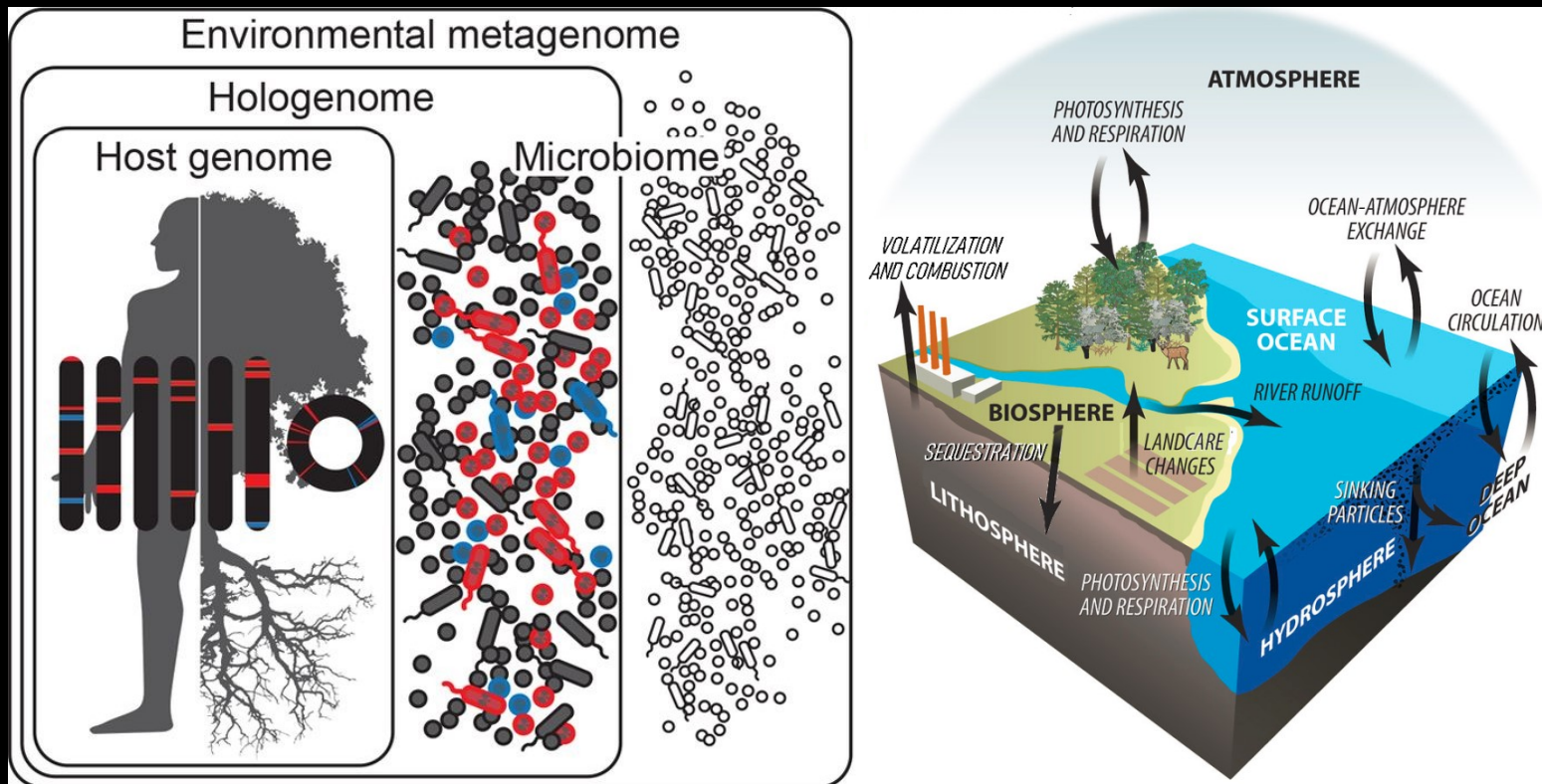
Share  
Express  
Unify

# GAIAZYME

- Balancing, Integration and Unification  
of *and* with the Earth
- Gaia = Living Earth (Earth Goddess)
- Enzyme = Catalyst (Leaven / Rise)
- Life Centered, Open Source, Universal Love
- Synanthropic Ecology Expansion
- Detriment Into Nutriment

# VISION

## Total Remediation and Fortification of Earth's Holobiont-Microbiome System.



# PRINCIPLES

## AUTONOMY

- Collabor-, Independence, Participation
- Culture, Community, Economy
- Sovereignty, Accessibility, Sustainability

## ECOLOGY

- Organisms, Populations, Feedback
- Cycles, Succession, Rhythm
- Regeneration, Transformation, Momentum

## CONSERVATION

- Edaphic , Climatic , Biotic
- Development , Protection, Defense
- Biointegrity, Biosecurity, Biosafety

## LIBERATION

- Expression, Information, Inspiration
- Evolution, Augmentation, Restoration
- Growth, Rest, Motion

## REMEDIATION

- Elements, Functions, Interactions
- Chemical, Biological, Physical
- Balance, Diversity, Organization

## FORTIFICATION

- Resources, Redundancy, Relationships
- Control, Stability, Quality
- Adaptation, Resilience, Vitality

# DOMAINS

## BIOSPHERE

- Producers, Consumers, Decomposers
- Health, Hygiene Habitat

## CARBON

- Capture, Application, Sequestration
- Connection, Conduit, Coherence

## LITHOSPHERE

- Topography, Soils, Minerals
- Form, Ratios, Spectrum

## HYDROSPHERE

- Primary, Watershed, Transpiration
- Storage, Catchment, Recycling

## ATMOSPHERE

- Anabolism, Catabolism Metabolism
- Permeation, Fixation, Respiration

# MISSION

**Simultaneously Optimize Public, Wildlife  
and Environmental Health**

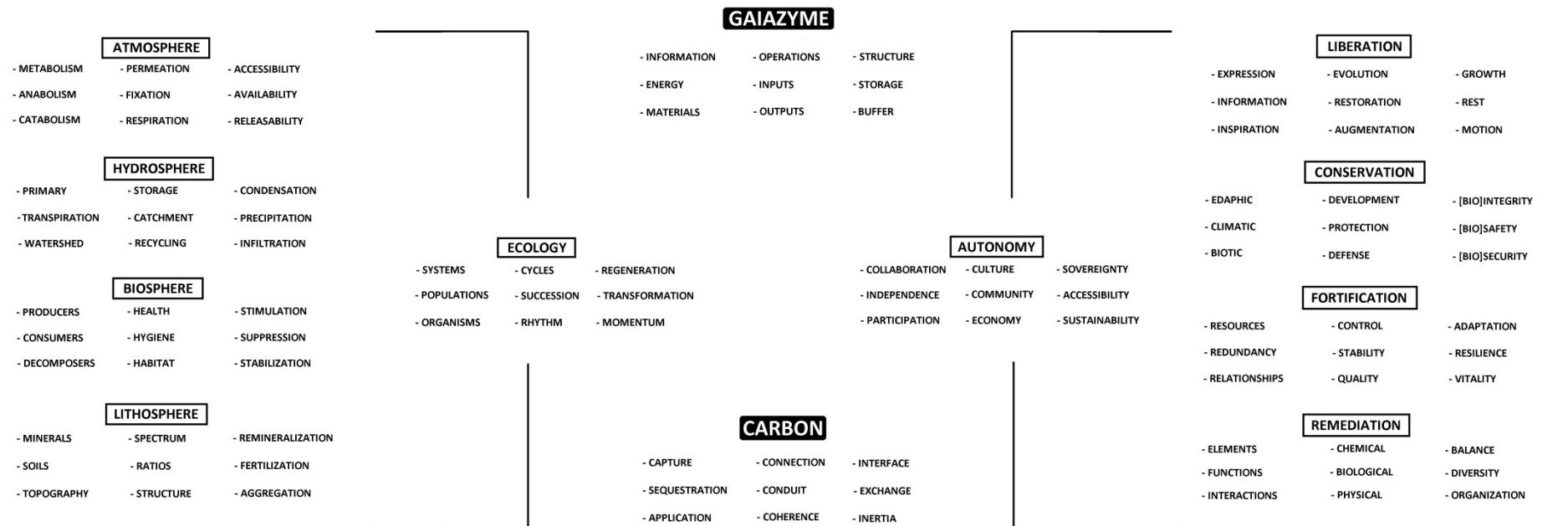
**Through Carbon-Based Reintegration  
Of and With**

**The Biosphere, Lithosphere, Hydrosphere  
and Atmosphere.**

# OBJECTIVES

Provide coherence, connections and conduit that promote interface, exchange and inertia between micro and macro energy, material and informational inputs, operations and outputs

## HUMUS BIOGEOMIMICRY





# COHUMIFICATION

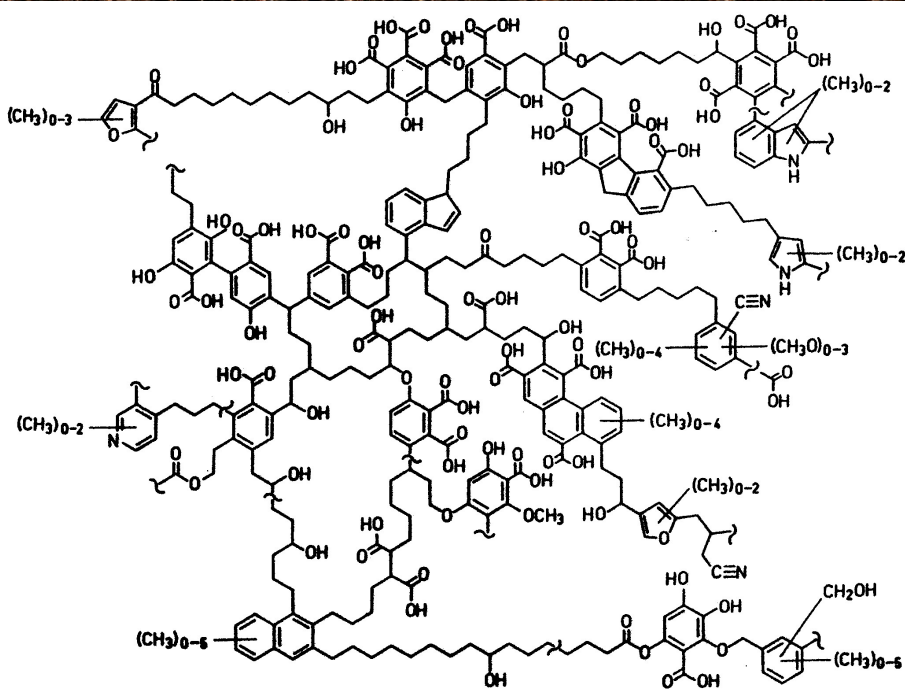


## SOCIAL, POLITICAL AND ECONOMIC COMPOST

**Humification** is a process wherein biotic and abiotic factors react with multiple organic and inorganic compounds to resynthesize biogeochemically reactive yet refractory supramolecular polymers.

**Humus** is a refractory yet reactive accumulation of the past decomposed into archetypal elements recombined to provide a foundational substrate as well as yielding materials and energy for the formation and construction of the future.

# HUMUS = HOPE



# SYSTEM

## PUBLIC HEALTH

- Physiology: Body, Mind, Spirit
- Sociology: Culture, Community, Economy
- Ecology: Sourcing, Processing, Cycling

## WILDLIFE HEALTH

- Biomass: Habitat, Microclimates, Sinks
- Biodiversity: Keystone, Flora, Fauna
- Bioactivity: Regeneration, Adaptation, Sanitation

## ENVIRONMENTAL HEALTH

- Integrity: Biogeology, Bioclimatology, Ecohydrology
- Security: Biogeochemical Cycles, Ecosystem Services, Planetary Boundaries
- Safety: Personal Boundaries, Toxicology, Hygiene

# ECO-IMMUNOLOGY

## HOLOBIONT

- Host/ Terrain: [Living Soil/ Terra]  
Morpho-, Physiologic, Hologenomic
- Cybernetics:  
Consumers, Decomposers, Producers
- Symbiogenesis/ Eukaryogenesis:  
Endobionts, Vesicles, Symbiogenetic

## PASSIVE/ CONSTITUTIVE

- Vectors: [Perennial Systems]  
Biological, Chemical, Environment
- Ecosanitation: [Not Sterilization]  
Humification, Regen-, Succession
- Biodegradation:  
Lithotroph, Saprotroph, Biotroph

## MICROBIOME

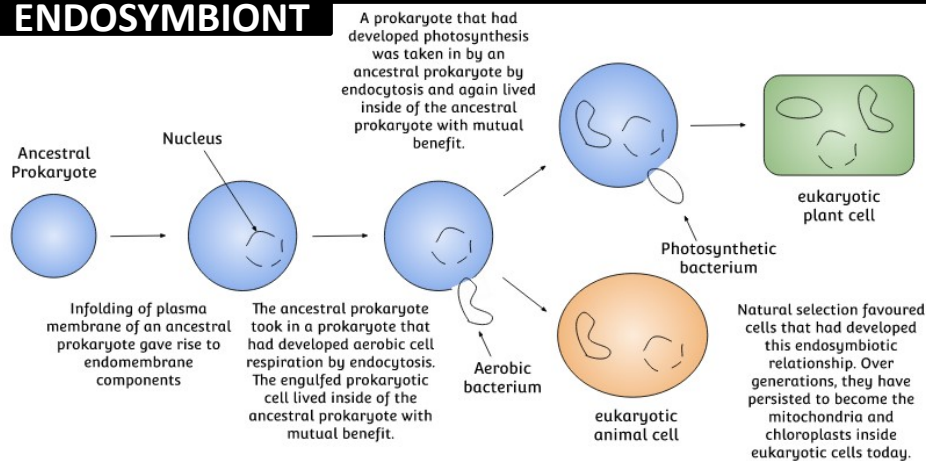
- Habitats:  
Pleomorphism, Virome, Pathobiome
- Habits:  
Obligate, Facultative, Opportunist
- Syntrophy/ Symbiosis:  
Commensal-, Mutual-, Parasitism

## ACTIVE/ INDUCIBLE

- Innate/ Scalar:  
Prevention, Toxicology, Tolerance
- Adaptive:  
Protection, Hygiene, Resilience
- Biocontrol/ Antibiosis:  
Suppression, Competition, Predation

# ECO-IMMUNOLOGY

## ENDOSYMBIONT

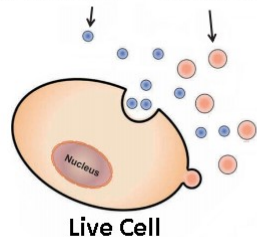


## Chloroplast and Mitochondrial Evidence

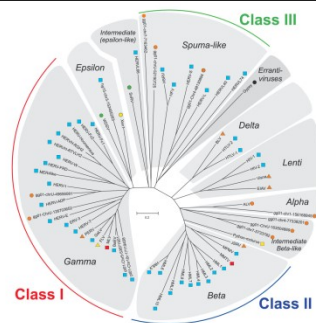
- They have double membranes
- They can only be produced by division of pre-existing mitochondria and chloroplasts
- They have their own DNA which is naked and circular
- They have ribosomes which are 70S in size

## EXTRACELLULAR VESICLES

### Exosome Microvesicle



## ENDOGENOUS VIRAL ELEMENT



## HORIZONTAL GENE TRANSFER

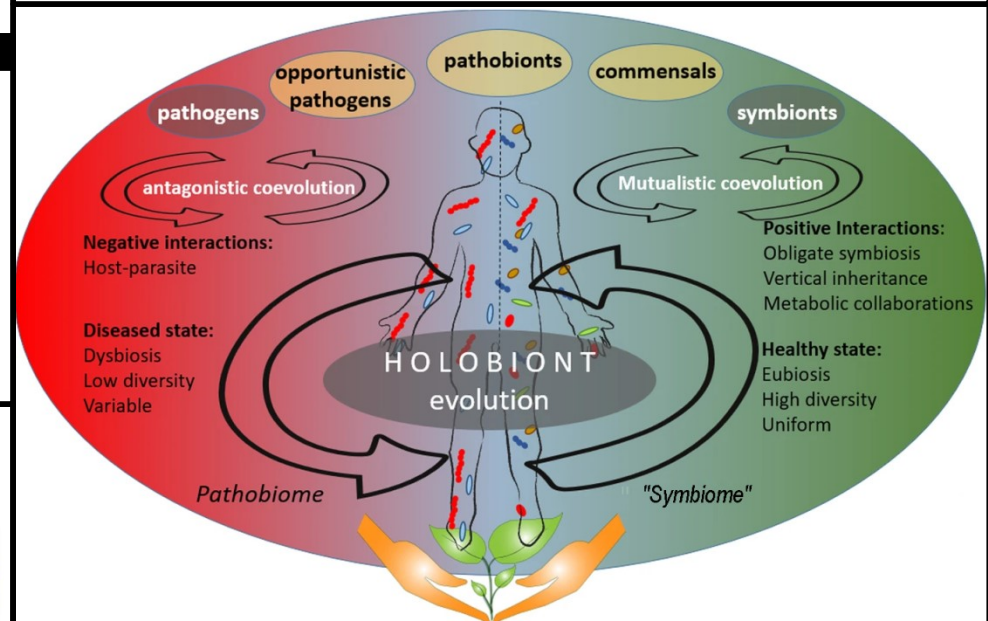
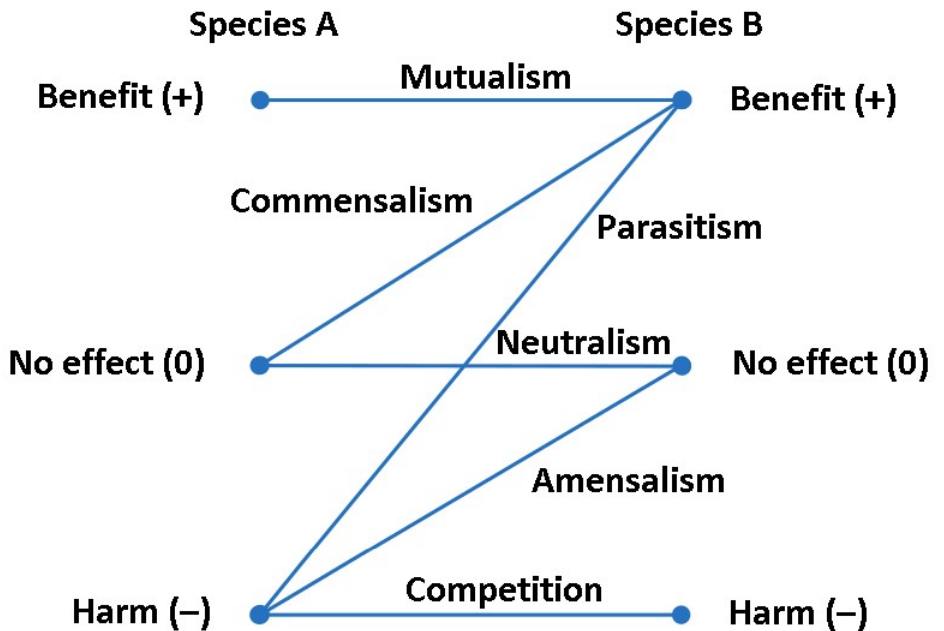
### Conjugative



### Transformative



### Transductive



# ECO-PATHOLOGY

## DYSBIOSIS

- Boundaries
- Balance
- Habitat

## ISOLATION

- Cancer
- Malnourishment
- Pathogenesis

## TOXICITY

- Auto
- Eco
- Psycho

## CONCENTRATION

- Poison
- Pollution
- Prison

## DISINTEGRATION

- Cycles
- Processes
- Connections

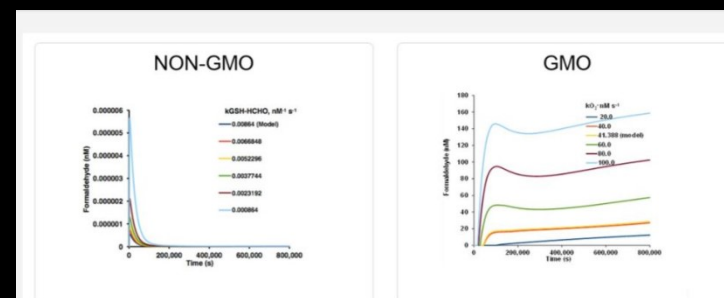
## TRANSPORTATION

- Importation
- Exportation
- Exploitation



# HUMAN PATHOLOGY

- ▶ **SEDENTATION** - Interstitial Acidosis/Stagnation
- ▶ **GMO's** - Corn, Soy, Canola, Salmon, Pork, Potato, Sugar Beet, Squash, Papaya, Apple, Pineapple, Alfalfa, Cotton
- ▶ **GLYPHOSATE** - Biocide, Redox Imbalance, Tissue Permeation
- ▶ **JUNK OILS** - High Omega 6, Polyunsaturated
- ▶ **ANTINUTRIENTS** - Lectins, Oxalates, Phytates, Goitrogens\*, Phytoestrogens, Tannins
- ▶ **INFLAMMATORY MEDIATORS** – Histamines
- ▶ **OVER-PROCESSED** Foods - Hydrogenated Oils, Refined Carbohydrates
- ▶ **OVER-COOKED** Foods - Advanced Glycation End-Products
- ▶ **XENOBIOTICS** - Artificial Chemicals/Light, Obesogens, Endocrine Disruptors
- ▶ **ANTIBIOTICS** - Glyphosate, CAFO Meat, Tap Water
- ▶ **IODINE BLOCKERS** - Fluorine, Bromine, Chlorine
- ▶ **MYCOTOXINS** - Aflatoxins, Ochratoxins, Patulin, Citrinin, Fumonisin, Zearalenone, Deoxynivalenol



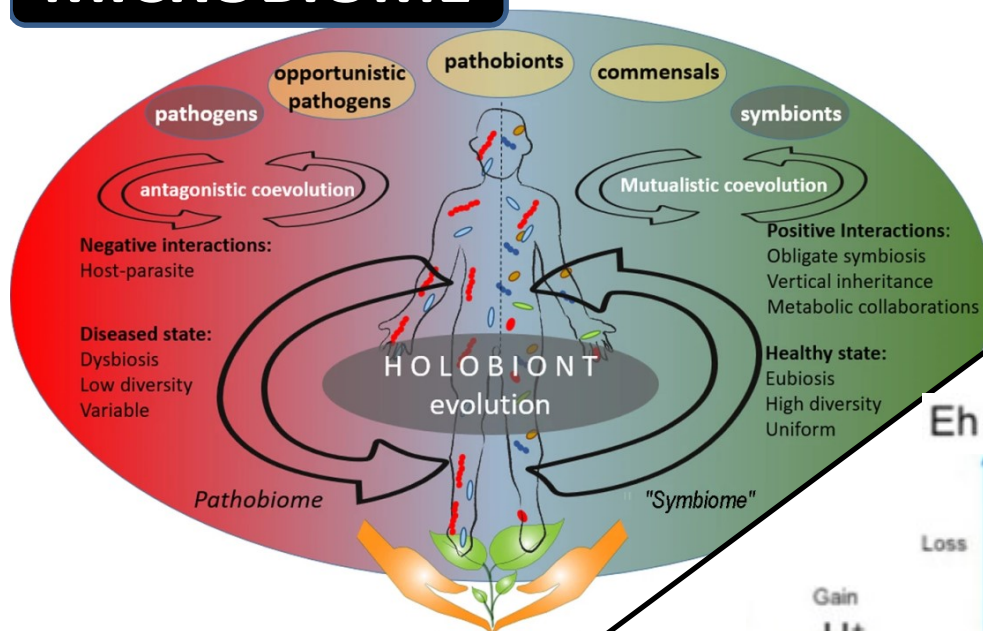
**Illustration 1: Formaldehyde Accumulation in GMO**



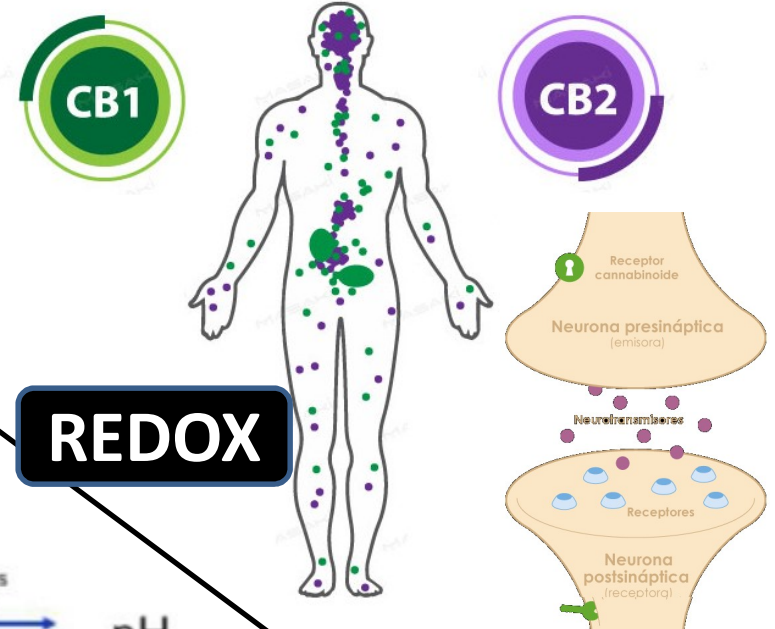
**Illustration 2: Glutathione Depletion in GMO**

- ▶ Putrescine (2.7-fold)
- ▶ Cadaverine (28-fold)

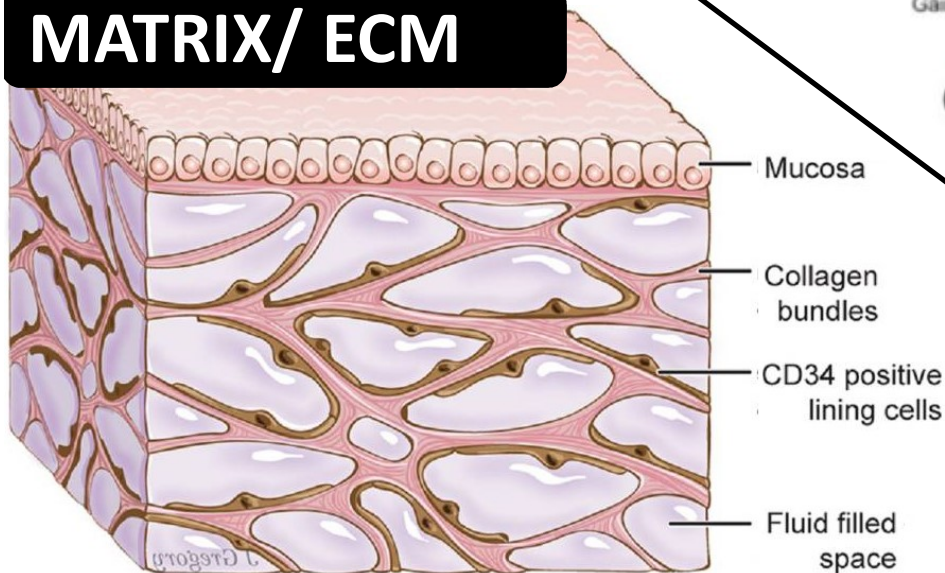
# MICROBIOME



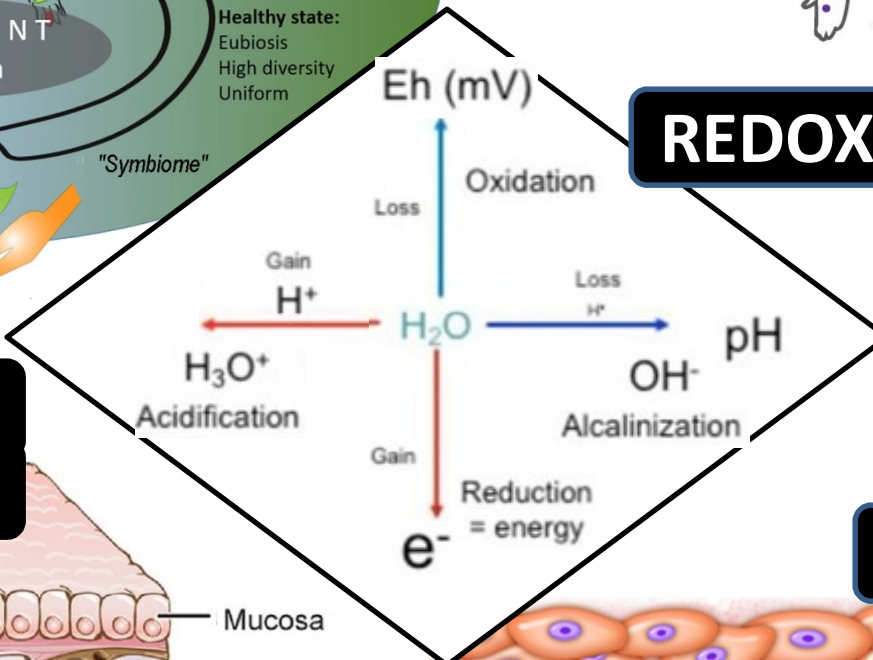
# ENDOCANNABINOID/ ECS



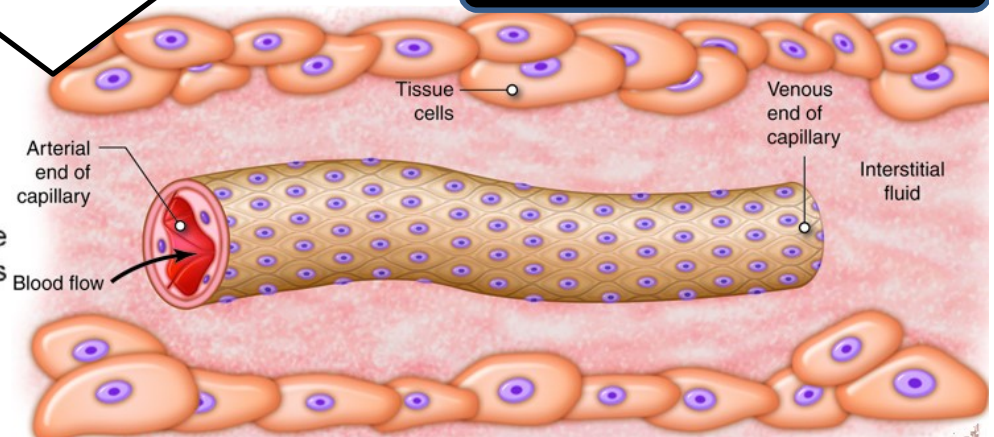
# EXTRACELLULAR MATRIX/ ECM



# REDOX



# INTERSTITIUM



# HUMIN WELLNESS

- ▶ **HEMP SEEDS / ACHENES:** Edestin Protein, Omega Fats, High Mineral
- ▶ **GELS / GLYCONUTRIENTS:** Aloe, Flax, Chia, Okra, Kelp
- ▶ **FERMENTS:** Probiotics, Postbiotics, Enzymes, Organic Acids
- ▶ **FIBER:** Prebiotics
- ▶ **HUMATES:** Fulvic Acid, Humic Acid, Humin, Shilajit
- ▶ **FULLERENES:** Charcoal, Carbon 60, Shungite
- ▶ **CULTURED BREAD/ SOURDOUGH:** Reduce / Convert Carbs
- ▶ **SPROUTED GRAINS:** Convert Carbs to Proteins, Deactivate Antinutrients
- ▶ **SPROUTED GREENS/ MICROGREENS:** Phytonutrients, Phytochemicals
- ▶ **PASTURE-RAISED:** Animal Health, Meat Health, Earth Health
- ▶ **NOSE TO TAIL/ OFFAL:** Vitamins, Minerals, Peptides, Amino Acids, Glycans
- ▶ **ESSENTIAL:** Macro – Fatty Acids, Amino Acids, Glycans / Micro – Minerals, Vitamins
- ▶ **ELECTROLYTES:** Macronutrients (Cl, Na, K, Ca, P, Mg), Micronutrients, Trace Elements
- ▶ **EXERCISE:** Aerobic, Strength, Stretching, Mental
- ▶ **ELECTRONS:** Antioxidants, H<sub>2</sub>, Hydride, Deuterium Depletion
- ▶ **MITOCHONDRIA:** Sunlight, Firelight, Infrared Light, Cryotherapy
- ▶ **METHYLATION:** Catecholamine, Homocysteine, Creatine, Phosphatidylcholine
- ▶ **WATER:** Purity, pH/Eh (ORP), Reduced, Ionic/Molecular H, Kangen, PAW, DDW





# PUBLIC HEALTH

## PHYSIOLOGY

### BODY

- Nutrition, Metabolism, Medicine
  - Exercise, Rest, Sleep

### MIND

- Cognition, Meditation, Grounding
- Socialization, Recreation, Learning

### SPIRIT

- Belonging, Purpose, Joy
  - Love, Unity, Peace

## SOCIOLOGY

### CULTURE

- Art, Science, Food
- Relationships, Ethics Communication

### COMMUNITY

- Housing, Municipalities, Centers
- Development, Leadership, Services

### ECONOMY

- Primary, Secondary, Tertiary
- Investing, Lending, Trading

## ECOLOGY

### SOURCING

- Information, Energy, Materials
- Cultivation, Harnessing, Harvesting

### PROCESSING

- Refining, Manufacturing, Packaging
- Storage, Transportation, Distribution

### CYCLING

- Solid, Liquid, Gas
- Collection, Treatment, Reuse

# WILDLIFE HEALTH

## BIOMASS

### HABITAT

- Pioneer, Climax, Niche
- Design, Construction, Defense

### MICROCLIMATE

- Temperature, Humidity, Conductivity
- Wind, Light, pH/Redox

### SINKS

- Minerals, Water, Carbon
- Adsorption, Absorption, Deposition

## BIODIVERSITY

### KEYSTONE

- Engineers, Mutualists, Predators
- Ecologic, Cultural, Economic

### FLORA

- Plants, Algae, Photobacteria
- Producers, Hosts, Composers

### FAUNA

- Macro, Meso, Micro
- Consumers, Movers, Decomposers

## BIOACTIVITY

### REGENERATION

- Assemble, Repair, Transform
- Anabolic, Metabolic, Catabolic

### ADAPTATION

- Growth, Evolution, Succession
- Commensalism, Parasitism, Mutualism

### SANITATION

- Sequester, Biodegrade, Biocontrol
- Competition, Predation, Suppression

# ENVIRONMENTAL HEALTH

## INTEGRITY

### BIOGEOLOGY

- Geomorphology, Chemistry, Geophysiology
- Architecting, Engineering, Operating

### BIOCLIMATOLOGY

- Precipitation, Evaporation, Respiration
- Albedo, Photosynthesis, Bioenergy

### ECOHYDROLOGY

- Circulation, Condensation Transpiration
- Ground, Surface, Biotic-Fluids

## BIO/SECURITY

### BIOGEOCHEMICAL CYCLES

- Lithosphere, Hydrosphere, Atmosphere
- Elements, Functions, Interactions

### ECOSYSTEM SERVICES

- Provisioning, Supporting, Regulating
- Establishment, Expansion Maintenance

### PLANET BOUNDARIES

- Patterns, Layers, Alignment
- Restoration, Protection Connection

## BIO/SAFETY

### PERSONAL BOUNDARIES

- Barriers, Buffers, Biomes
- Shelter (Clothing), Conditions, Company

### TOXICOLOGY

- Ecological, Physiological, Behavioral
- Pollution, Poison, Pathobiome

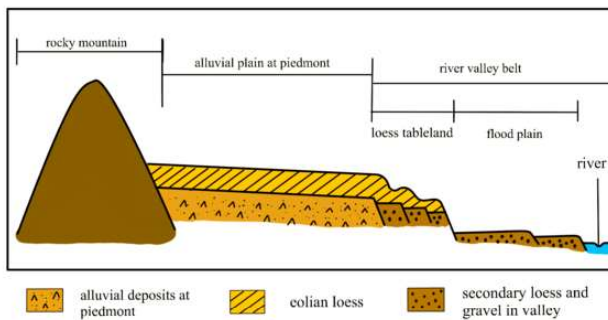
### HYGIENE

- Food, Water, Air
- Intake, Terrain, Waste

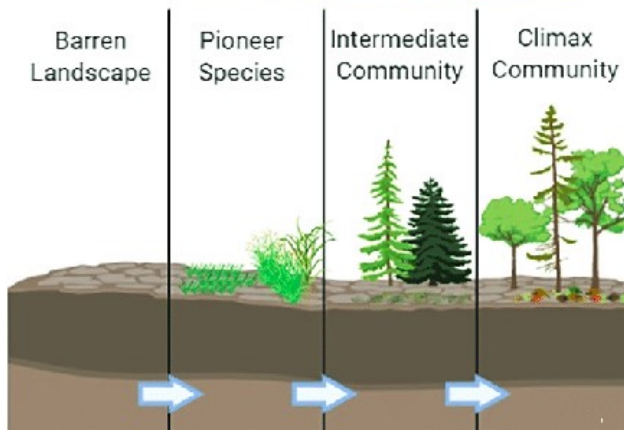
# BIO-INTEGRITY

## BIOGEOLOGY

- Geomorphology  
Chemistry, Geophysics



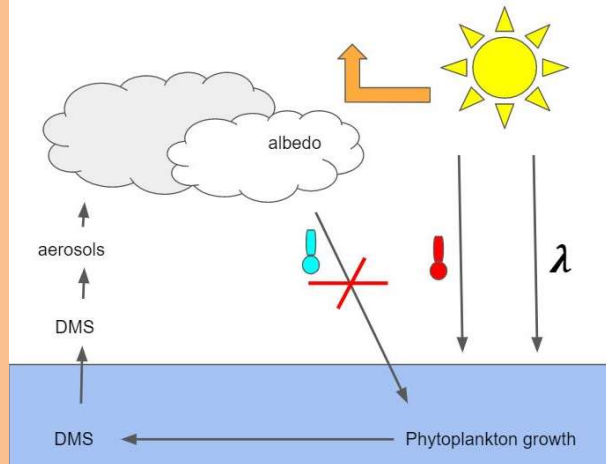
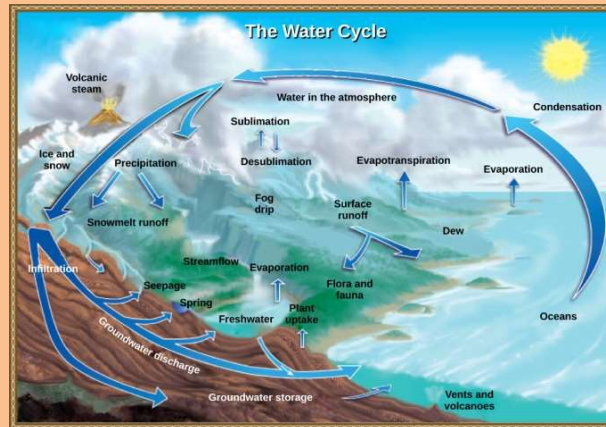
### Primary Succession



- Architecting,  
Operating, Engineering

## BIOCLIMATOLOGY

- Precipitation,  
Evaporation, Respiration

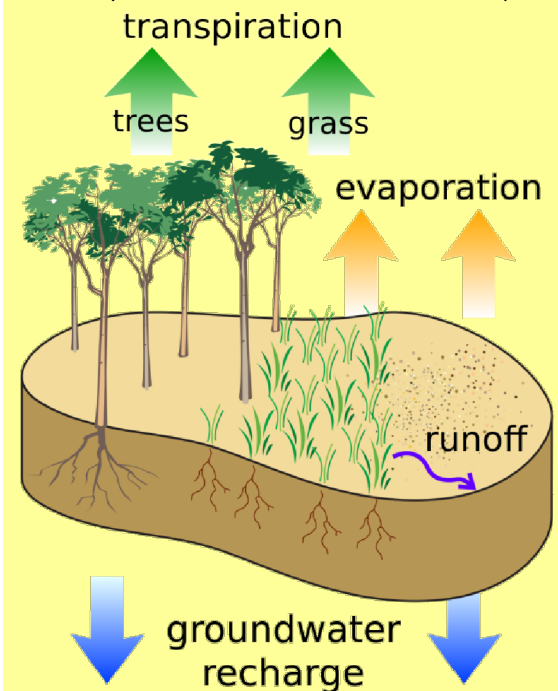


- Albedo, Photosynthesis,  
Bioenergy

## ECOHYDROLOGY

- Condensation,  
Circulation, Transpiration

evapotranspiration =  
transpiration + evaporation

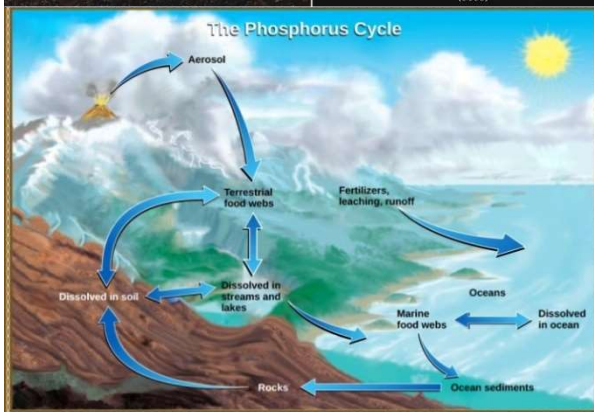
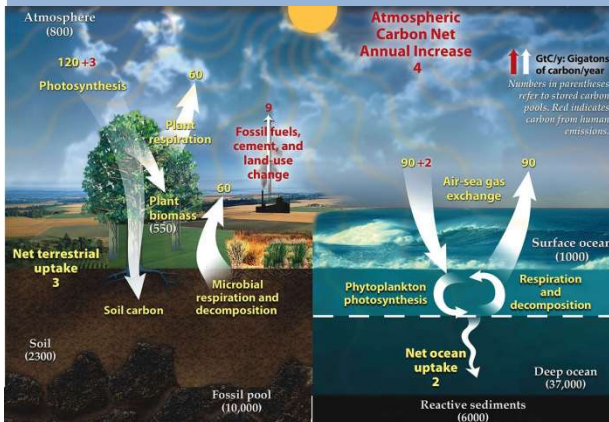


- Ground, Surface,  
Biotic Fluid

# BIO-SECURITY

## BIOGEOCHEMICAL CYCLES

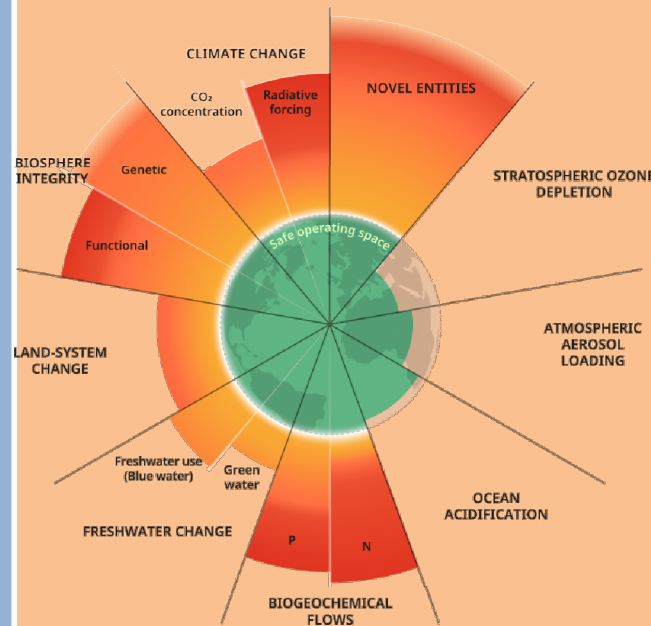
- Lithosphere, Hydrosphere, Atmosphere



- Elements (C, N, P, S, etc)
- Functions, Interactions

## PLANETARY BOUNDARIES

- Patterns, Layers, Alignment



- Restoration, Protection, Connection

## ECOSYSTEM SERVICES

- Provisioning, Supporting, Regulating



- Establishment, Expansion, Maintenance

# **“ONE HEALTH” IS NOT THE ONE**

- **Technocratic, Centralized, Surveillance**
- **Weaponized, Manufactured Scarcity**
- **Misanthropic Anthropocentrism**
  
- Raw Foods are Bad, Vivisection is OK
- PR Buzzwords Dress Old Philosophies
- Inherent Fear of Humanity and Ecology



# W.H.O. WHO? WEF, WTF?

## POSITIVE

- Thrive, Stoke and Abundance
- Healing and Regeneration
- Synanthropic:  
Humans = Keystone

## UNITY

- NOT Uniformity
  - Science, Art and Spirit
  - Conservation and Liberation:  
To Keep and To Free
- (Trad/ Mod, Based/ Woke, etc..)*

## AUTONOMY

- Proof of Work/ Stake
- Point of Use Production/ Cycling
- Decentralization/ Open Sourcing:  
Independent, Voluntary, Sustainable

## RELATIVE

- Ecosphere Dysbiosis > Climate
- Ecosystem Services > Gov Services
- Ecological Health = Social Health:  
Economy, Community, Culture

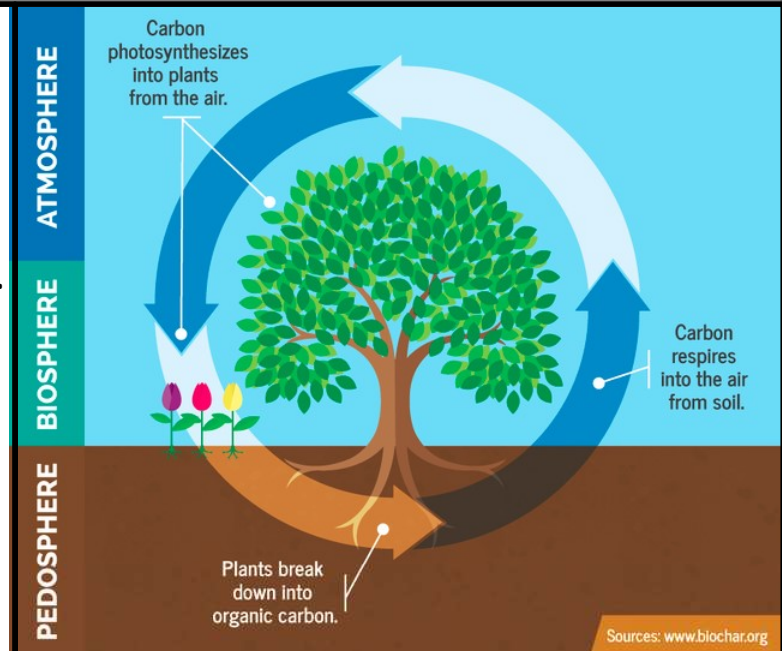
# BIO-GEOENGINEERING

**Biocentric, Biogenic and Synanthropic** inverse answer to **MisAnthropocentric** and **Anthropogenic** geoengineering.

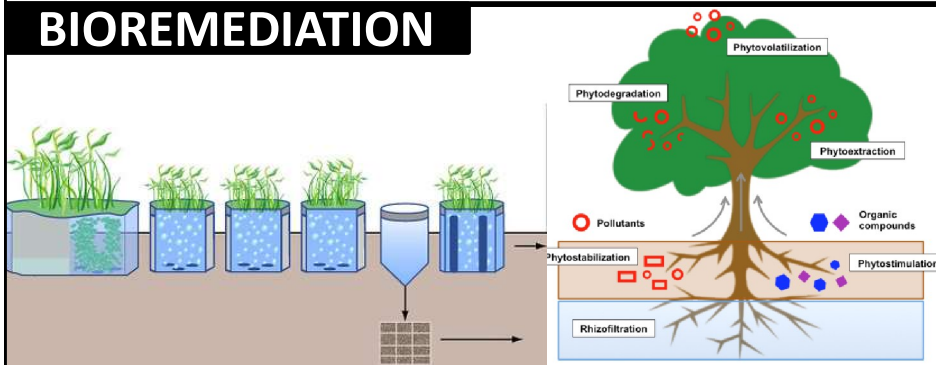
Baby with the Bathwater. **Green ≠ Greenwashing.**  
**Informed Consent** requires defined **Forms and Functions**.

Ethical tech applications work to **cooperate with Nature and Humanity** - not attempt to enforce upon or conquer.

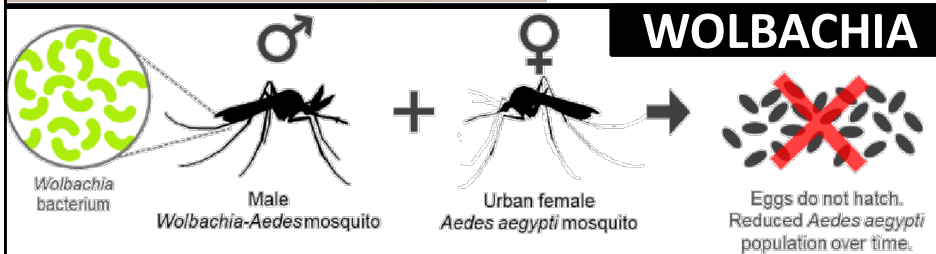
Whether in **Medicine, Agriculture, Energy, Security**, etc...  
 (Injections, Genes, Dusting, Devices, Defense, Leaders)



## BIOREMEDIATION



## WOLBACHIA



## AGRO-REWILDING

- **Habitat Succession** [Biomass]
- **Desert-To-Forest Transition** [Biodiversity]
- **Ecosystem Service Regeneration** [Bioactivity]





# SOIL IS THE ANSWER

NOW, WHAT IS YOUR QUESTION?

• Food Quality	- Hidden Hunger / Type B Malnutrition
Food Integrity	- Exploitation / CAFOs, GMOs
Food Security	- Starvation / Type A Malnutrition
Food Safety	- Poison, Pathobiome, Pollution
Air Quality	- Disease, Visibility
Air Security	- Climate Instability
Air Safety	- Pollution, Poison, Pathobiome
Water Quality	- Disease, Type B Dehydration
Water Security	- Drought, Flood, Type A Dehydration
Water Safety	- Pathobiome, Poison, Pollution, Erosion
Shelter/Clothing Integrity	- Mining, Sweatshop,
Shelter/Clothing Security	- Homelessness, Disease
Shelter/Clothing Safety	- Poison, Pollution
Environment [Bio]Integrity	- Disaster, Climate Instability
Environment Biosecurity	- Species/Habitat Loss, Extinction, GMOs
Environment Biosafety	- Disease, Famine
Social Integrity	- Conflict, Oppression,
Social Security	- Poverty, Hunger, Insanity
Social Safety	- Crime, Discrimination



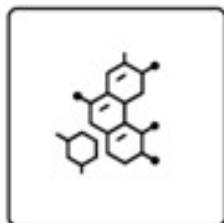
# **INTEGRATIVE LANDCARE**

**Traditional Knowledge, Contemporary Science**

- **High Brix, Nutrient Dense, Pest Immune Plants**
- **Higher Yield Than GMO, Cleaner Than Organic, Repairs Nature (Not Just Does Less Harm)**
- **Remediate, Remineralize and Regenerate Fertile, Drought Resistant Topsoil**
- **Integrate Disciplines, Integrate Earth**
- **Non-Toxic is Floor, Regenerative is Ceiling**
- **Living Soil Matrix is Essential for Earth Health**

# CARBON BASED SOIL FERTILITY

## ORGANIC MATTER



- **Ex Situ:** Humification, Fermentation, Pyrolysis
- **In Situ:** Sheet Composting, Mulch, Manure
- **Liquid C Pathway:** Material, Energy, Information
- **Structure:** Adhesion, Lubrication, Aggregation
- **Storage:** Nutrients, Water, Carbon
- **Buffer:** Electrochemistry, Temperature, Ecosphere

## LIVING MULCH



- **Biomass:** Habitat, Microclimate, Sinks
- **Biodiversity:** Genotype, Phenotype, Chemotype
- **Bioactivity:** Anabolic, Catabolic, Metabolic
- **Protection:** Evaporation, Leaching, Volatilization
- **Prevention:** Erosion, Compaction, Cementation
- **Promotion:** Resilience, Succession, Regeneration

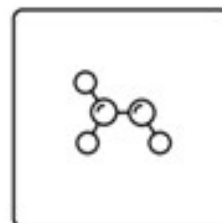
## FOOD WEB



- **Keystone:** Earthworms, Mycorrhizal Fungi, Insects
- **Olophage:** Archaea, Bacteria, Fungi
- **Totivore:** Protists, Invertebrates, Vertebrates
- **Sanitation:** Bio-control, -degradation, -turbation
- **Mobilization:** Mineralization, Oxidation, Reduction
- **Immobilization:** Chelation, Fixation, Sequestration

# NATURAL PLANT HEALTH

## NUTRITION



- **Mineral:** Macro-, Micronutrients, Trace Elements
- **Molecular:** Monomers, Oligomers, Polymers
- **Microbial:** Metabolites, Rhizophagy, Symbiosis
- **Productivity:** Growth, Yield, Consistency
- **Efficiency:** Inputs, Operation, Output
- **Sustainability:** Ecology, Autonomy, Feedback

## METABOLISM



- **Primary:** Carbohydrates, Proteins, Lipids
- **Secondary:** Isoprenes, Phenolics, Nitrogenous
- **Tertiary:** Elicitors, Regulators, Biostimulants
- **Vitality:** Sap Integrity, Cell Wall, Waxy Cuticle
- **Quality:** Sensory, Nutritional, Medicinal
- **Immunity:** Active, Passive, Systemic

## MICROBIOME



- **Rhizosphere:** Organotroph, Lithotroph, Syntroph
- **Endosphere:** Intra-, Extra-, Inter-cellular
- **Phyllosphere:** Mutual, Commensal, Pathogenic
- **Fortification:** Biochemical, Anatomical, Epigenetic
- **Organization:** Biological, Geological, Ecological
- **Adaptation:** Climatology, Pathology, Toxicology



# ANALYTICS



## GEO-FEEDBACK

### SOIL & CHEMICAL

**GEO-FEEDBACK** is our range of comprehensive and state of the art soil tests. We measure a wide range of minerals and chemicals for optimal plant and microbial metabolism.

- **SOIL** - Soluble/Total N, P, K, Ca, Mg, S, B, Fe, Mn, Zn, Cu, Mo, Si, Co, So, Cl, Al, Na
- **CARBON** - Humus, Labile, Recalcitrant, Biomass
- **TOXICOLOGY** - Agrochemicals, Industrial Pollutants, Heavy Metals



## BIO-FEEDBACK

### MICROBIOLOGICAL

**BIO-FEEDBACK** is our series of qualitative and quantitative microbial analysis. Individual organisms and full ecological profiles are screened to identify beneficials and pathogens.

• **SOIL** • **COMPOST** • **LIQUID** • **LEAF** • **ROOT** • **CROWN**

- **BIOMASS:** Food Web Microscopy
- **BIOACTIVITY:** CO2 Respiration, General Function, Specific Function
- **BIODIVERSITY:** Metagenomics



## PHYTO-FEEDBACK

### PLANT NUTRITION

**PHYTO-FEEDBACK** is our range of plant tissue and sap analysis. True mineral levels in plants are accurately gauged to consistently optimize growth, health, yield and biochemistry.

- **LAB TISSUE ANALYSIS** - N, P, K, Ca, Mg, B, Fe, Zn, Cu, Mn, Mo, Co, Se
- **FIELD SAP ANALYSIS** - Sugars, EC, pH, NO<sub>3</sub><sup>-</sup>, K<sup>+</sup>, Ca<sup>++</sup>, Na<sup>+</sup>
- **LAB SAP ANALYSIS** - Sugars, pH, EC, N, NO<sub>3</sub><sup>-</sup>, NH<sub>4</sub><sup>+</sup>, P, K, Ca, Mg, S, B, Si, Fe, Zn, Cu, Mn, Mo, Cl, Na, Al



## HYDRO-FEEDBACK

### WATER QUALITY

**HYDRO-FEEDBACK** is our series of comprehensive water tests measuring the widest range of minerals and water quality factors to correspond with high performance landcare

- **IRRIGATION WATER** • **RUN OFF WATER** • **LIQUID AMENDMENTS**
- pH, TDS, Alkalinity, Hardness, 47 VOC's, 11 Heavy Metals, 20 Pesticides, Herbicides & PCB's, Al, Ba, BrO<sup>-</sup>, Fl, B, Ca, Cl, Cu, Fe, K, Mg, Mn, Ni, NO<sub>3</sub><sup>-</sup>, NO<sub>2</sub><sup>-</sup>, Na, SO<sub>4</sub><sup>-</sup>, Se, Si, Zn

# LOGISTICS

## GEOAUGMENTATION

AMENDMENTS - FERTIGATION - FOLIARS

## GEOREMEDIATION

CHELATION - REDUCTION - OXIDATION

## GEOFORTIFICATION

ECOLOGY - CARBON - MINERALS

## BIOAUGMENTATION

MICROBES - PLANTS - ANIMALS

## BIOREMEDIATION

CATABOLIC - ANABOLIC - METABOLIC

## BIOFORTIFICATION

NUTRITION - METABOLISM - MICROBIOME

# MANAGEMENT SUCCESSION

## CONVENTIONAL

- MONOCULTURE
- EXTRACTIVE
- HYDROPONIC

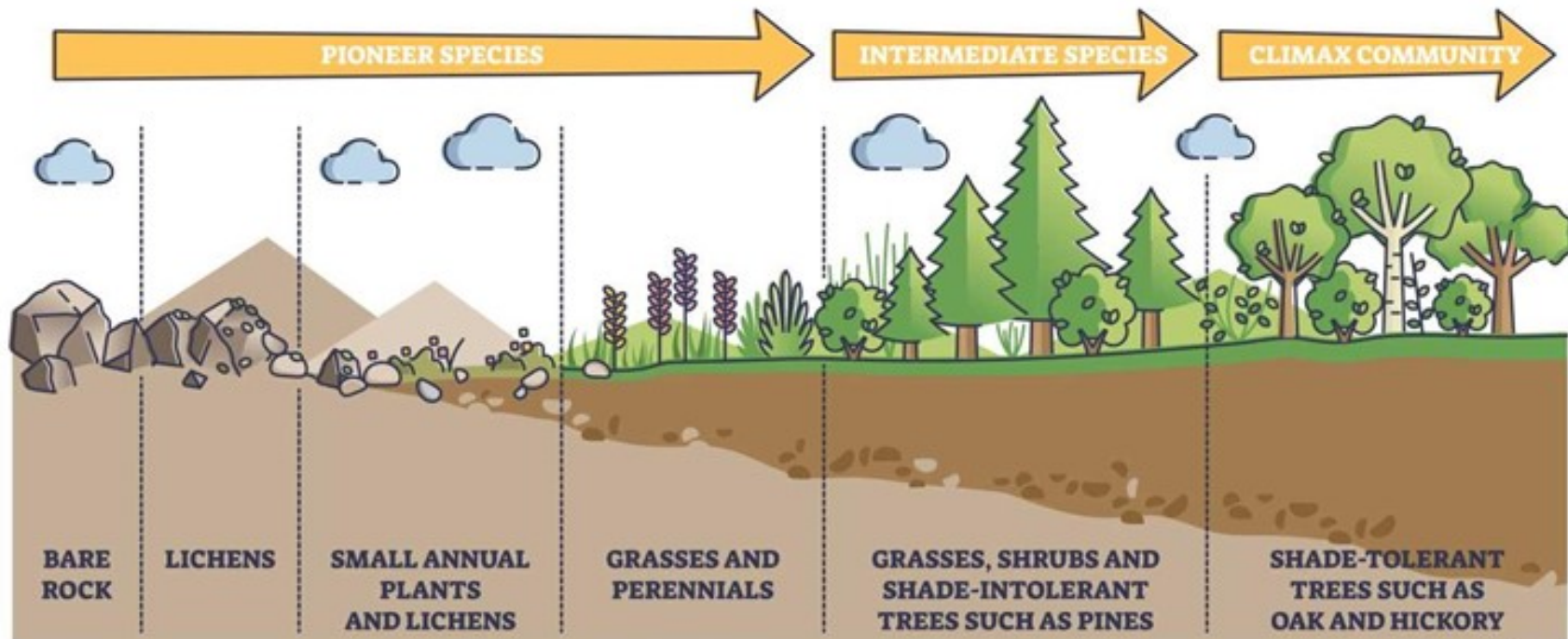
## TRANSITIONAL

- BIOLOGICAL
- NO SPRAY/TILL
- ORGANIC

## ECOLOGICAL

- PERMACULTURE
- REGENERATIVE
- BIODYNAMIC

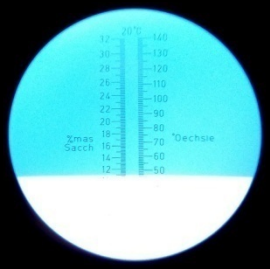
## PRIMARY SUCCESSION



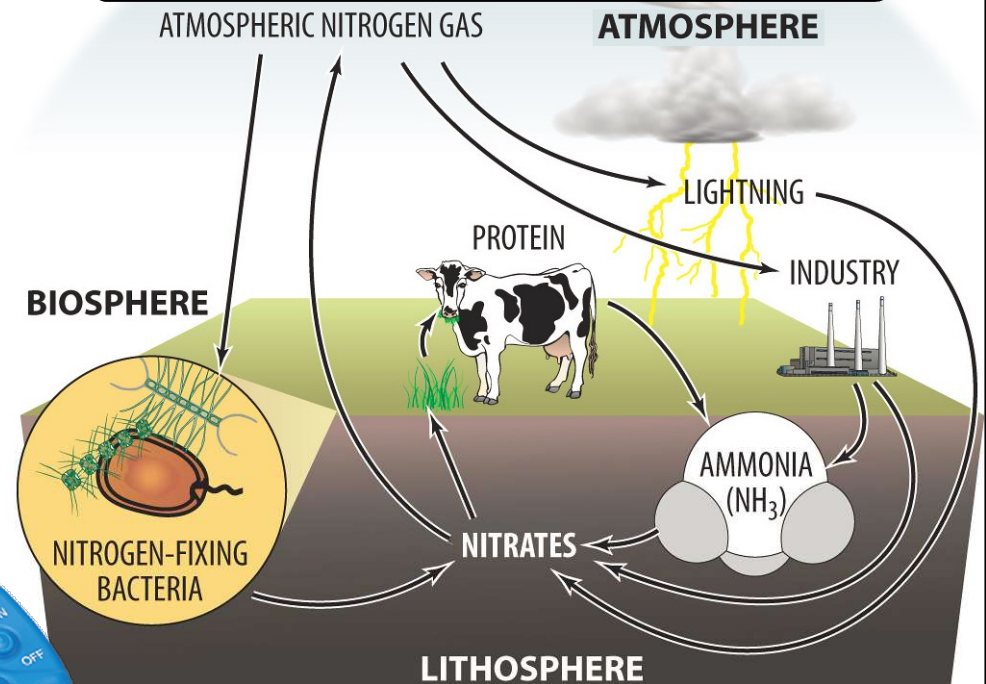


# INTEGRATIVE LANDCARE

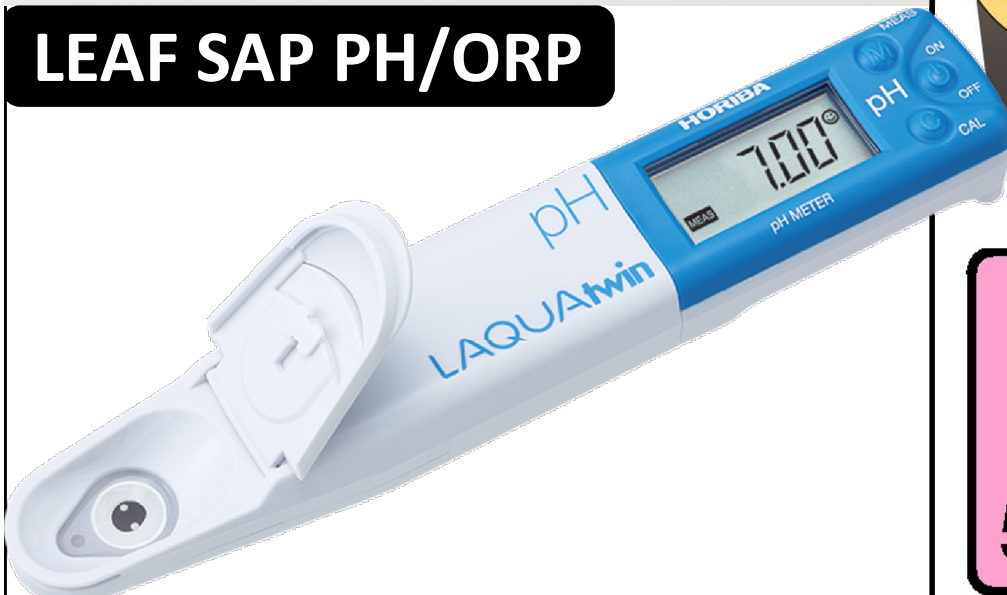
## LEAF SAP BRIX



## NITRATE / N FIXATION



## LEAF SAP PH/ORP



## MICRONUTRIENTS

26  
**Fe**  
55.85

25  
**Mn**  
54.94

29  
**Cu**  
63.55

30  
**Zn**  
65.38

# GAIAZYME INDUSTRIES

## WASTE MANAGEMENT



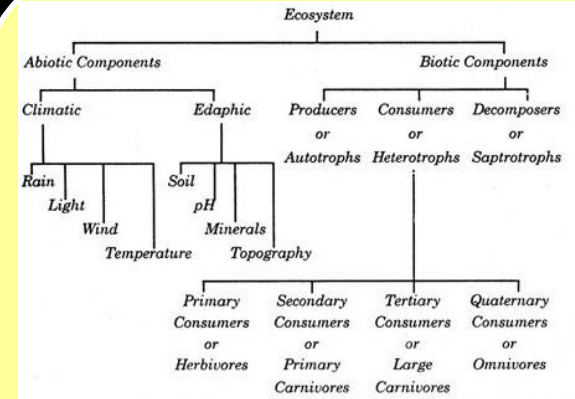
- Valorization, Ecological Co-Processing/ Sanitation, Biologic/Geologic Recycling Organics Humification, Solid, Liquid, Hazardous
- Diversion, Recovery, Prevention, Education, Conversion, Training

## BIO- REMEDIATION



- In Situ  
Bioventing, Biostimulation, Biodegradation, Biosparge, Bioaugmentation, Natural Attenuation
- Ex Situ  
Land Farming, Composting, Biopiles, Bioreactors

## ENVIRONMENTAL ENGINEERING



- Water Quality, Wastewater/Stormwater Management, Soil Quality, Air Quality, Pollution Management
- Ecological Restoration, Wildland Conservation, Agro-Rewilding



# CANNABIS PERMACULTURE

## PLANET

**Wildlife:** Biomass, Biodiversity, Bioactivity

**Environment:** Integrity, Biosecurity, Biosafety

**Carbon Based Soil Fertility:**

Organic Matter, Living Mulch, Soil Microbiome

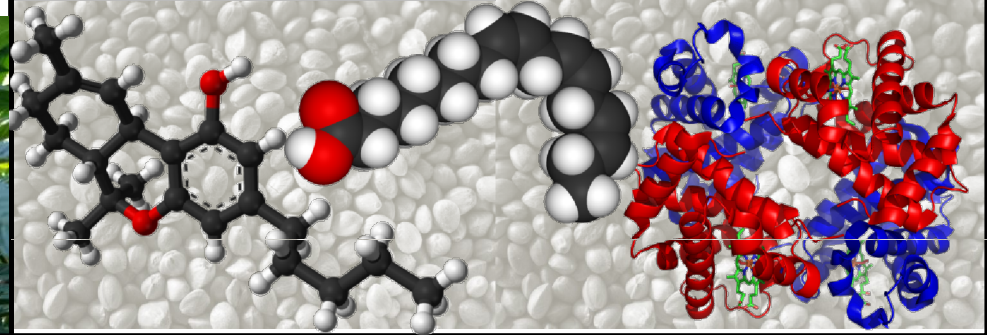


## PEOPLE/ ANIMAL

**Nutrients:** Fatty Acids, Edestin Protein, Leaf Juice

**Medicine:** Phytocannabinoids, Endocannabinoid System, Essential Oils

**Quality of Life:** Entheogen, Recreation, Sensation



## PUBLIC

**Social:** Culture, Community, Economy

**Ecological:** Sourcing, Processing, Recycling

**Teleological:** Inspiration, Unification, Elevation



## PLANT

**Nutrition:** Mineral, Molecular, Microbial

**Metabolism:** Primary, Secondary, Tertiary

**Microbiome:** Rhizosphere, Endosphere, Phyllosphere

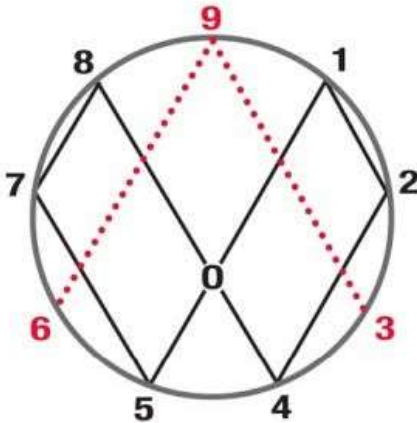




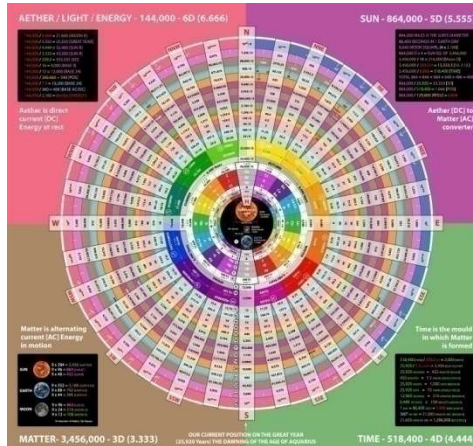
# HONORABLE MENTIONS

## SCIENCE

### VORTEX BASED MATHEMATICS



### PLASMOID UNIFICATION MODEL



## WELLNESS

### BIONUTRIENT FOOD ASSOCIATION



### WORLD MOSQUITO PROGRAM

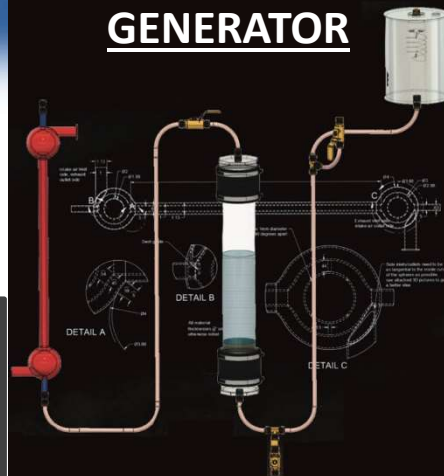


## TECH

### SUN ON DEMAND



### THUNDERSTORM GENERATOR



### ORION MESSENGER



## ECOLOGY



# RESOURCES

## GROUPS

- Gaiazyme Enterprises • Strike Foundation
- Azentive • Energetic Elements • Thundergro
- Mas Humus • La Via Campesina • JADAM
- Holistic Mgmt Intl • Permaculture Institute
- Sacred Cow • Institute for Responsible Tech
- Amazon Mycorenewal • Paani Foundation
- Ocean Cleanup • Coral Guardian • Unifyd\*
- Regenerative Organic Alliance • Demeter
- Soil Food Web Inc • Fungi Perfecti • BeCrop
- Microbiometer • Cytosolve • E.E. Systems\*

## SCIENTISTS

- Walter Russell • Viktor Schauberger
- Rudolf Steiner • Nikola Tesla • Ken Wheeler
- John Keely • Stan Meyer • John Hutchison
- Ken Shoulders • Takaaki Matsumoto • Bob Greenyer
- Malcolm Bendall • Marko Rodin
- Moray B King • TH Moray • Patrick Flanagan
- Buckminster Fuller • Robert Edward Grant
- Robert Temple • Chris Bird • Randall Carlson
- CL Kervran • Rupert Sheldrake • Fritz Popp
- Lynn Margulis • Dennis Kloeck • John Todd

## HEALERS

- Holistic, Integrative, Functional, Quantum, Bio
- Doulas, Doctors, Dentists, Psychologists
- Jack Kruse • Sara Pugh • Darko Valceck
- Weston Price • Sally Fallon • Michio Kushi
- Catharine Shanahan • Ron Schmid • Yahki
- Shiva Ayyadurai • Zack Bush • Bob Melamede
- Edward Group • Chervin Jafarieh • Avocado
- Matthias Rath • Stanislaw Burzynski • Dr. Sebi
- William Walsh • Ron Teagarden • Brian Ardis

## AGRONOMISTS

- Hugh Lovel • Arden Andersen • Neil Kinsey
- Graeme Sait • Gary Zimmer • Jerry Brunetti
- Michael Melendrez • Bruce Tainio • Bob Faust
- Maynard Murray • Art Ziegler • P.A. Yeomans
- Bill Mollison • Geoff Lawton • Darren Doherty
- Sepp Holzer • Joel Salatin • Allen Savory
- Phil Callahan • Elaine Ingham • Olivier Husson
- Thomas Dykstra • John Kempf • Don Huber
- Horst Marschner • William Albrecht • Carey Reams
- Sir Albert Howard • Masanobu Fukoka