

Permaculture Design in the City

Growing with Nature — Not Against It

By: Annamaria Varona



ABOUT ANNAMARIA VARONA

Annamaria Varona is Co-Owner of Homan Grown LLC with offices and plant nurseries in Chicago, Illinois and Milwaukee, Wisconsin in the United States of America.

Annamaria is a founding member of the Permaculture Chicago Teaching Institute and is a certified Permaculture Designer and Teacher. She is also certified in Sustainable Horticulture and Agriculture with the Windy City Harvest Program through the Chicago Botanic Garden.

Annamaria studied Chinese Traditional Feng Shui and Numeromancy with masters in the USA, Canada, Malaysia, Europe and applies this indigenous knowledge to every garden she designs. Her specialty is in urban permaculture and edible landscapes that impact the well-being of communities.

“Where I walk, flowers bloom.”- Annamaria Varona

WHAT IS PERMACULTURE?



Permaculture is more than planting seeds in the ground — it's planting systems of care. It's a way of designing our spaces so that every element supports the next, creating balance, abundance, and renewal. When we say *permaculture*, we mean *permanent culture and permanent agriculture*. It is a lifestyle that works with nature instead of against it.

In the same spirit, permaculture invites us to observe what already lives around us. Before we build, we pause and ask:

- How does water move through this space?
- What plants already thrive here?
- How can we honor the soil, the insects, and the people who share this land?

At its heart, permaculture teaches care — care for Earth, care for people, and care for community. When these three are in harmony, we restore what's been lost.

Permaculture: *An approach to land management and philosophy that adopts arrangements observed in flourishing natural ecosystems."*

(Definition adapted from the Oxford English Dictionary and the works of Bill Mollison and David Holmgren.)

PERMACULTURE: INDIGENOUS KNOWLEDGE AND ORIGINS

Before permaculture had a name, the Earth already had teachers. Long before the word sustainability was spoken in classrooms, Indigenous communities across the world lived it — through observation, respect, and reciprocity with the land. Modern permaculture, developed by Bill Mollison and David Holmgren in the 1970s, stands on the shoulders of these ancient systems of care.

Indigenous Wisdom as Foundation

The first permaculturists were the Earth's original stewards gardeners, and forest people who understood that life thrives in balance. They cultivated food without chemicals, restored water systems, and built homes that breathed with the landscape. Their teachings remind us that knowledge of the Earth is not new — it is remembered.

This wisdom lives in every seed saved, every shared harvest, every circle of community care.



THE ETHICS AND PRIME DIRECTIVE

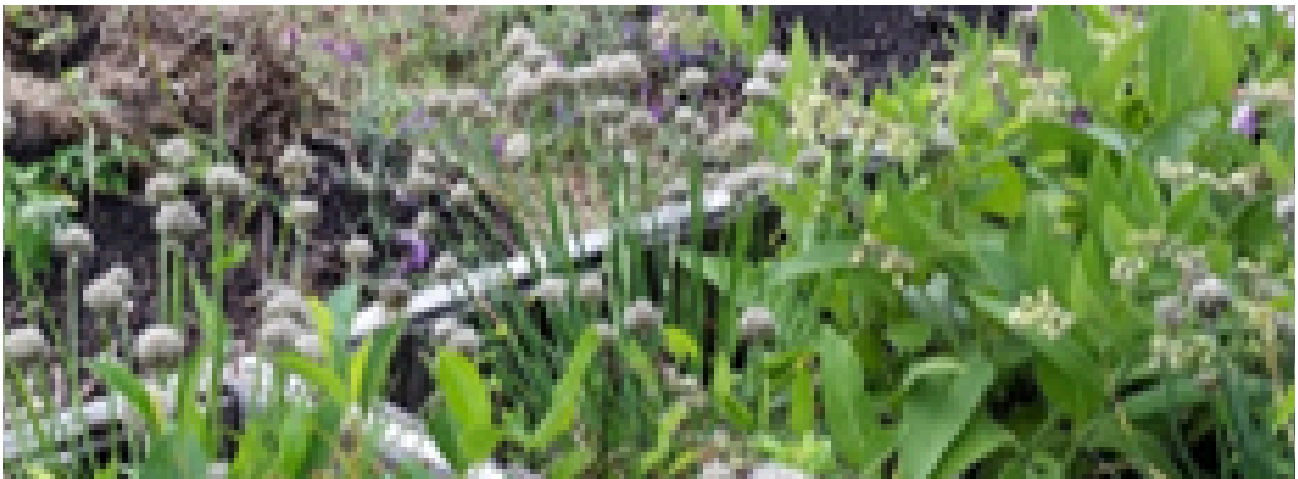
Permaculture begins with a promise — to care for all forms of life. At its heart are three guiding ethics that shape every design, decision, and action. These values are the foundation of balance between people, planet, and prosperity.

EARTH CARE – PROTECT AND REGENERATE THE PLANET

Everything begins and ends with the Earth. This ethic calls us to heal soil, conserve water, plant trees, and restore ecosystems that have been stripped bare. When we protect the land, the land provides — food, medicine, shelter, and beauty. In permaculture, Earth Care means living as a participant, not a consumer, within nature's cycle.

EARTH CARE – PROTECT AND REGENERATE THE PLANET

Healthy communities grow from healthy relationships. People Care asks us to meet one another's needs with compassion, equity, and respect. This includes sharing food, knowledge, and opportunity; creating safe spaces to live and learn; and supporting each person's right to thrive. When one person suffers, the whole ecosystem feels it.



FAIR SHARE – SHARE THE SURPLUS. STRENGTHEN THE WHOLE

The Earth gives enough for everyone — if we learn to share. Fair Share means redistributing what we have in ways that build community, reduce waste, and honor future generations. When we share time, skills, seeds, and surplus, abundance multiplies. This ethic reminds us that sustainability is not about owning more — it's about giving back more than we take.

THE PERMACULTURE FLOWER: BEYOND GARDENING

Permaculture is often mistaken for just gardening, but it's much more — it's a whole-system approach to living. The Permaculture Flower helps us see that sustainability is not limited to soil or seeds; it blossoms through every aspect of life.

Each petal of the flower represents one area where we can live in balance with nature — from how we build homes and grow food to how we educate, trade, and connect spiritually. Together, these petals create a complete ecosystem of care.

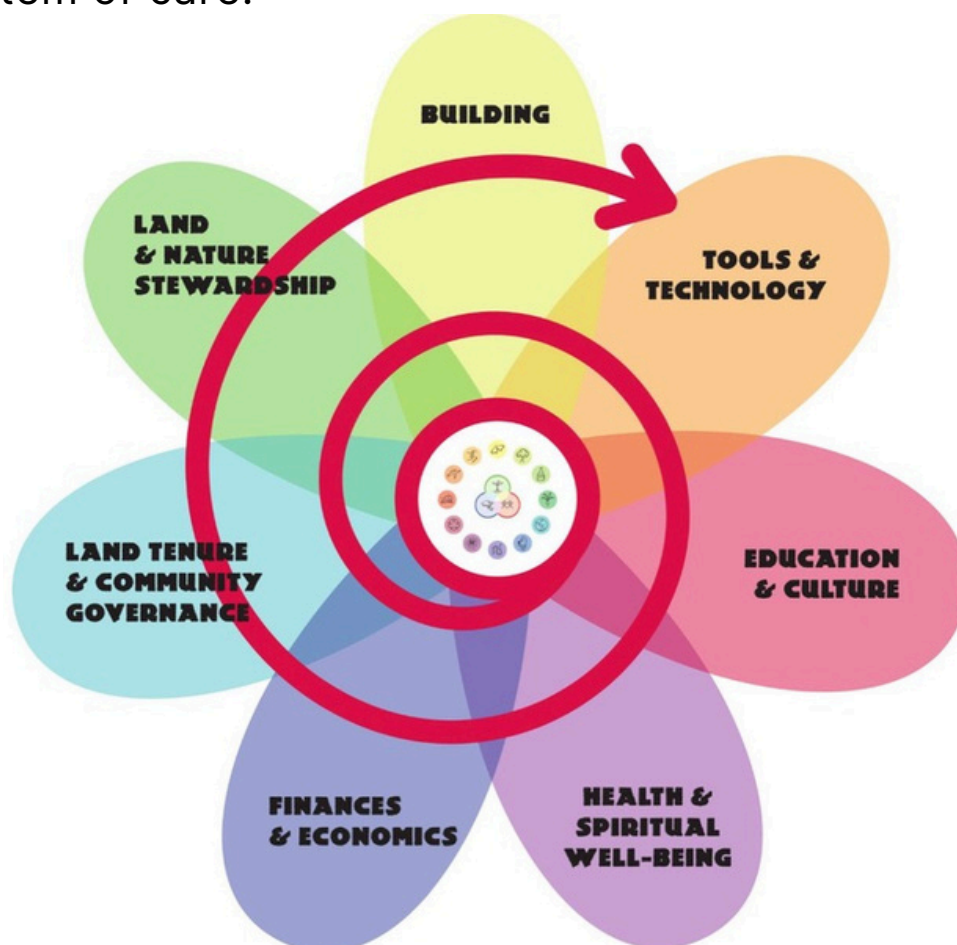


Image above: **The Permaculture Flower** — adapted from the original design by David Holmgren (2002), *Permaculture: Principles & Pathways Beyond Sustainability*. (Image widely shared for educational purposes under Creative Commons-style use.)

THE PERMACULTURE FLOWER: BEYOND GARDENING

Imagine this flower as a blueprint for a thriving world. Each part supports the others, forming a living cycle:

- **Building:** Designing structures that nurture the environment through green roofs, natural materials, energy efficiency, and creative reuse — connecting shelter with stewardship.
- **Tools & Technology:** Using innovations that support life — solar power, composting systems, rainwater collection, and shared community tools that work with nature rather than against it.
- **Education & Culture:** Teaching and learning from one another, honoring ancestral and Indigenous knowledge, and creating spaces where education restores both people and planet.
- **Health & Spiritual Well-Being:** Creating environments that heal body and spirit through nourishment, movement, mindfulness, and connection to the Earth.
- **Finances & Economics:** Redefining wealth as shared abundance — through fair trade, cooperative work, and local sustainability that strengthens community resilience.
- **Land Tenure & Community Governance:** Building systems where people make collective decisions, share resources, and protect what matters most for future generations.
- **Land & Nature Stewardship:** Caring for the Earth through regenerative farming, tree planting, native restoration, and protection of natural habitats that sustain all living things.
- **Spiritual & Cultural Renewal:** Remembering that every act of care, art, and creativity strengthens the human spirit and reconnects us to the sacredness of the Earth.

This flower is alive — it reminds us that when one petal grows, they all grow. True sustainability is not a checklist; it's a rhythm, a daily practice that touches every layer of our lives.

When we see the world as a garden, even our work, art, and relationships become part of the ecosystem.

PRINCIPLES OF PERMACULTURE DESIGN

Permaculture is both philosophy and practice — a way of seeing, thinking, and designing that follows nature’s lead. Before we plant, build, or plan, we first shift our mindset. We learn from nature’s patterns and allow them to shape how we live. These guiding attitudes and principles form the foundation of every permaculture system, from gardens to communities.

Bill Mollison’s Laws of Attitude: The Permaculture Mindset

Bill Mollison, one of the founders of permaculture, believed that change begins with how we think. His *Laws of Attitude* are reminders to stay humble, curious, and creative when working with the Earth. They teach us that every challenge carries the seed of its own solution.

- **Work with nature, not against it.**
- **The problem is the solution.**
- **Everything gardens.**
- **Cooperate rather than compete.**
- **Make the least change for the greatest effect.**
- **The yield of a system is unlimited — if we design with purpose.**

These principles encourage us to slow down, observe, and design in partnership with the world around us. They remind us that we are not separate from nature — we are participants in it.

““ THOUGH THE PROBLEMS OF THE WORLD ARE INCREASINGLY COMPLEX, THE SOLUTIONS REMAIN EMBARRASSINGLY SIMPLE.” ●●
– BILL MOLLISON

PRINCIPLES OF PERMACULTURE DESIGN

David Holmgren's 12 Principles of Design

Building upon Mollison's mindset, David Holmgren introduced twelve design principles that show how to apply permaculture in real life. Each principle is like a lens for seeing patterns, relationships, and opportunities in the environment.

Together, they teach us to:

- **Observe carefully before acting.**
- **Capture and store energy from natural systems.**
- **Value diversity and cooperation.**
- **Design small, slow, and lasting solutions.**
- **Reduce waste and share abundance.**
- **Adapt to change and find lessons in every challenge.**

These ideas blend observation with action — teaching us to design with intention, respond creatively, and live regeneratively.

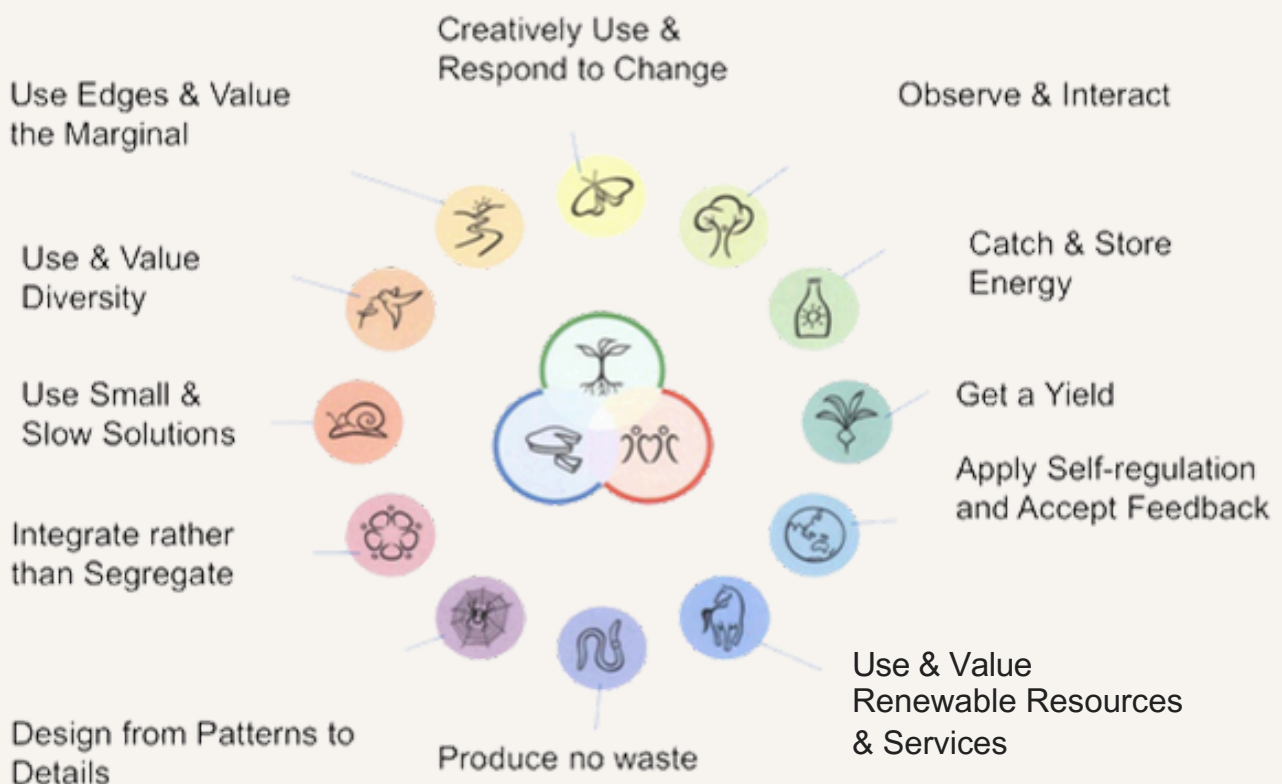


Image above: The Principles of Permaculture Design — adapted from Bill Mollison (1978) and David Holmgren (2002).

THE FIVE RESPONSIBILITIES OF A PERMACULTURIST

In permaculture, there are five simple but powerful responsibilities. Together, they form a cycle of regeneration — a blueprint for how to live with purpose and reciprocity.



Plant Forests — Rebuild Life

Forests are the lungs of our planet. Planting trees, shrubs, and native species creates shade, improves air, provides food, and restores ecosystems.



Build Soil — Nurture the Foundation

Healthy soil is living — full of bacteria, fungi, and nutrients that make life possible. By composting, mulching, and planting cover crops, we return life to the ground.



Store and Conserve Water — Protect the Flow

Water is life. Permaculturists learn to capture and reuse it through rain barrels, swales, and natural filtration.



Save and Share Seeds — Preserve the Story

Seeds carry memory, history, and hope. Each one holds generations of care, adaptation, and survival.

Saving seeds ensures that our food, our culture, and our future remain resilient and diverse.



Each one, Teach one — Legacy

Pass on knowledge and wisdom.

FOREST GARDENING AND FOOD FOREST DESIGN

What Is Edible Forest Gardening?

It's important to understand what forest gardening is not. It's not gardening in a forest — it's gardening like a forest.

It is a perennial polyculture of multipurpose plants.

Let's break that down:

- **Perennial:** Most plants regrow every year without replanting.
- **Polyculture:** Many different species grow together in harmony.
- **Multipurpose:** Each plant contributes to the success of the whole by fulfilling many functions — providing food, shade, pollination, or nutrients for the soil.

When these elements combine, we create a living system that produces food and resources year after year, just like nature does.

Forest Gardening Intention

The intention behind a food forest is simple and powerful. Forest gardening holds three primary goals:

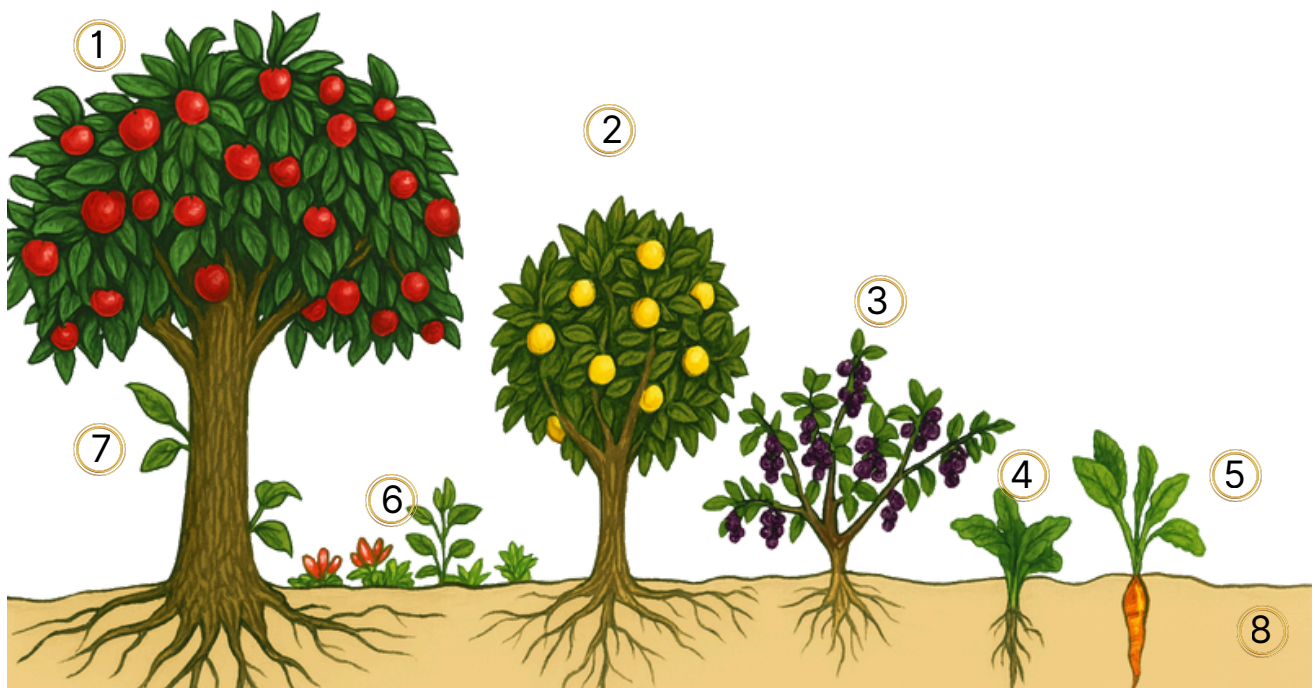
1. Produce high yields of diverse products such as food, fuel, fiber, fodder, fertilizer, "pharmaceuticals," and fun.
2. Create a largely self-maintaining garden that thrives with minimal human input.
3. Build a healthy ecosystem that supports biodiversity and resilience.

FOREST GARDENING AND FOOD FOREST DESIGN

The Eight Layers of a Food Forest

Each layer in a food forest represents a unique ecological niche. Together, they create balance, productivity, and beauty.

1. Canopy Layer: Tall fruit and nut trees forming the roof of the ecosystem.
2. Low Tree Layer: Smaller fruit trees, like dwarf apple or citrus, thriving beneath the canopy.
3. Shrub Layer: Berry bushes, herbs, and nitrogen-fixing plants that support the system.
4. Herbaceous Layer: Edible and medicinal herbs that grow close to the ground.
5. Root Layer (Rhizosphere): Underground crops like carrots, onions, and sweet potatoes.
6. Ground Cover Layer (Soil Surface): Plants like strawberries or clover that protect the soil and prevent erosion.
7. Vertical Layer (Vines): Climbing plants like beans, grapes, or passionflower that reach upward toward the sun.
8. Fungal Layer: Mushrooms and decomposers that recycle nutrients and keep the soil alive.



ZONES AND SECTORS: MAPPING YOUR SPACE

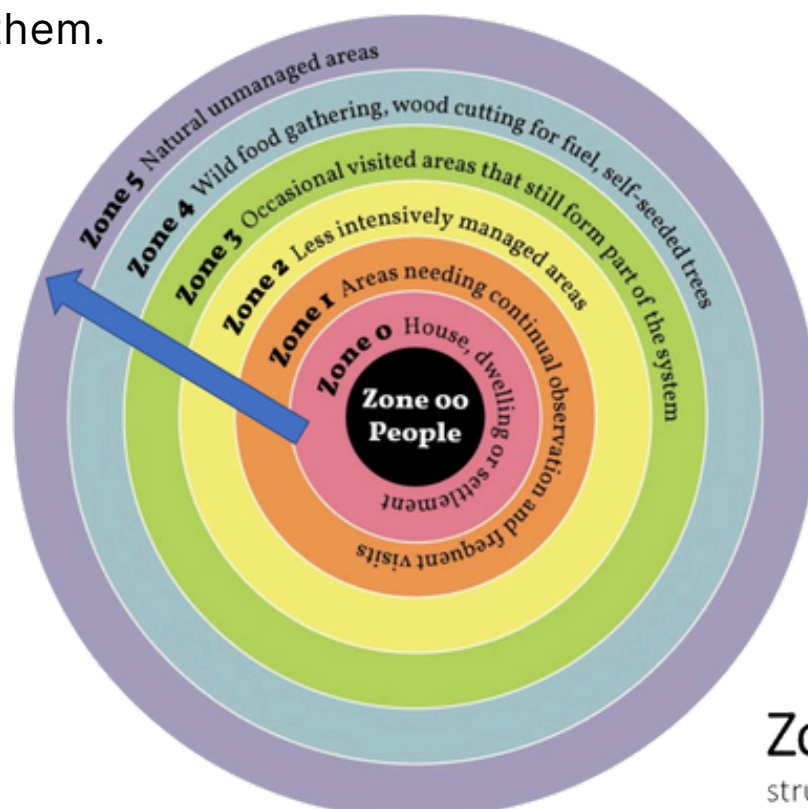
Understanding Zones: From Home to Wilderness

In permaculture design, Zones help us understand how energy flows — from where we live and work (the center) outward into nature. They show how often we interact with different spaces and how each area supports self-reliance, community, and natural balance.

Think of zones as ripples of activity that begin with people and extend outward into the wild.

Energy in Motion

Energy moves outward from the home and returns through cycles of observation and renewal. By understanding these zones, we can place gardens, paths, water systems, and habitats where they work with our daily patterns — not against them.



Zones — Energy from the structure / system out

Image above: Adapted from Greencorps Training 2025, Slide 14 — “Zones: Energy from the Structure/System Out”

ZONES AND SECTORS: MAPPING YOUR SPACE

Zone 0 — The Home or Center

House, dwelling, or settlement. This is where we live, plan, and observe daily life. It represents the heart of our system — where ideas and care begin.

Zone 1 — Consumption & Production

The area that needs continual observation and attention.

Here, we grow herbs, vegetables, and plants that need daily care. Compost bins, rainwater systems, and small tools are often found here — everything close at hand for regular use.

Zone 2 — Home Garden for Self-Reliance

Less intensively managed but still productive.

This space supports small fruit trees, perennials, and animals like chickens or rabbits. It's where we build self-reliance — growing food, saving seeds, and practicing resourcefulness.

Zone 3 — Home Orchard / Forest Garden / Vacant Lots

Visited occasionally, this zone supports larger systems — orchards, field crops, or food forests. It also allows for local trade or bartering — what we grow here can feed others, not just ourselves.

Zone 4 — Vacant Lots / Community Gardens

A managed area used for community to gather and grow together. It's a bridge between cultivation and wilderness — a shared space where people and ecosystems could benefit.

Zone 5 — Wilderness / City Parks / Forest Preserves

Natural and unmanaged. A space for observation, not control — where wild plants, insects, and animals thrive. Here we learn from nature's design — how everything connects and regenerates without human interference.

ZONES AND SECTORS: MAPPING YOUR SPACE

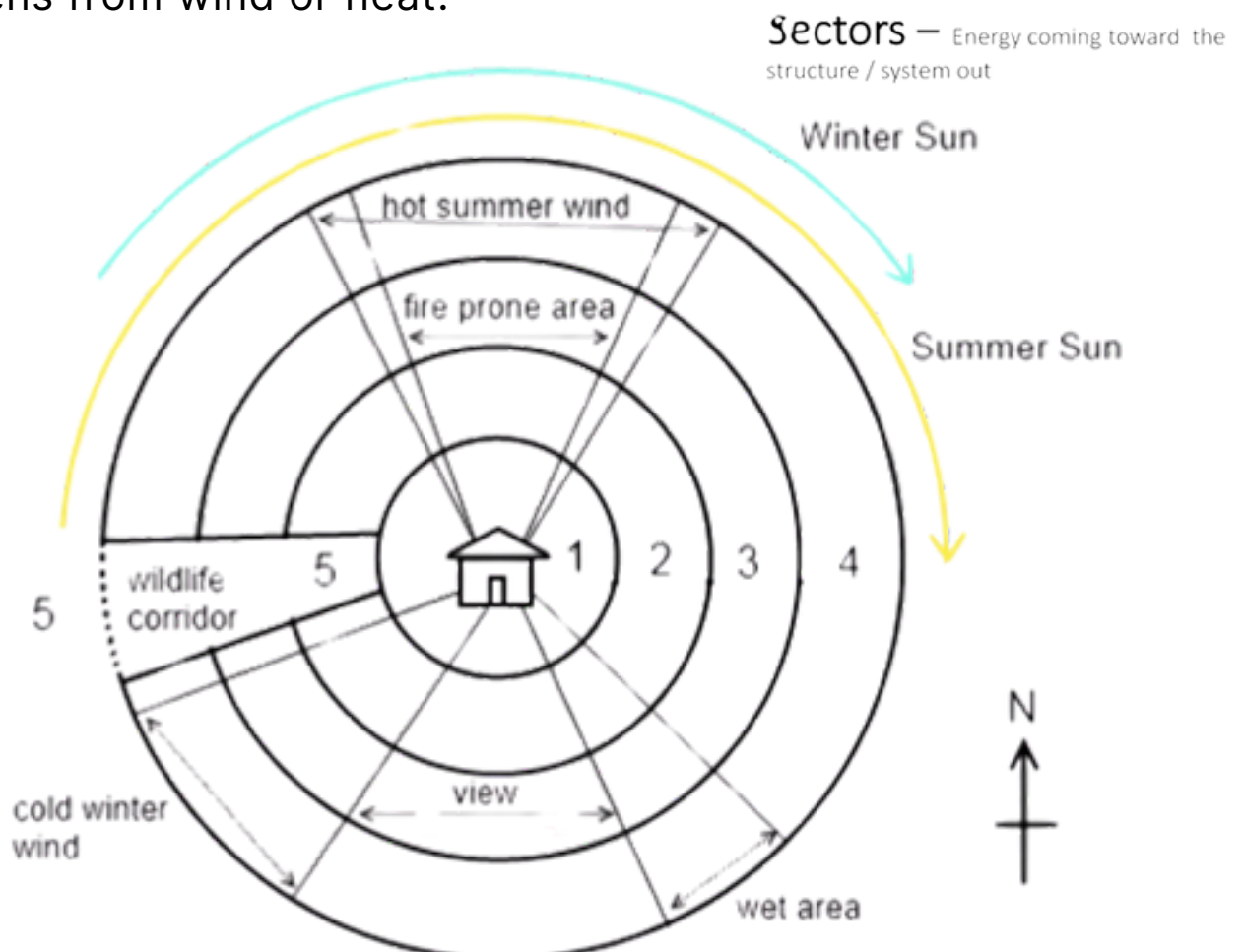
Understanding Sectors: Energy in Motion

While zones focus on how often we interact with a space, sectors show us how energy moves through it.

Sectors map:

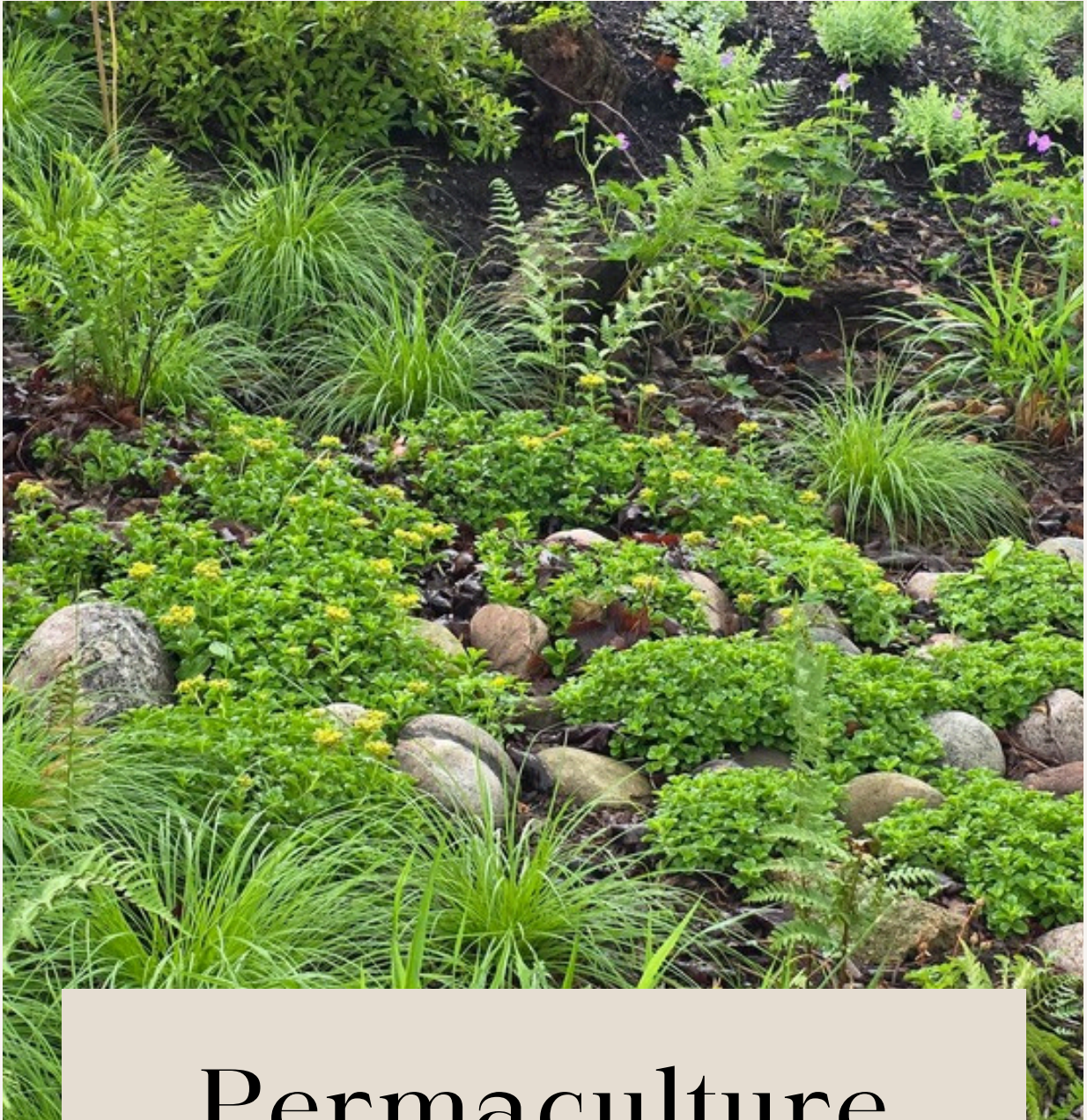
- **Sunlight** (where the summer and winter sun fall),
- **Wind** (hot summer winds, cold winter winds),
- **Water flow** (rainfall, drainage, flooding paths),
- **Fire risk, noise, or views**
- **Wildlife corridors** (paths animals naturally take).

By mapping these forces, we learn where to place trees for shade, where to harvest rainwater, and how to protect our gardens from wind or heat.



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