PDC Course outline @ Walkers Reserve, Barbados
In-Person Immersive Permaculture Design Certificate Course

A PDC is an internationally recognized unit comprising of an overview of the permaculture ethics and principles as set out by Bill Mollison. This course follows the recognized subject matter and template, giving participants and authentic permaculture experience and certifying course. Participants will leave with the ability and knowledge to begin making positive, sustainable changes in their lives and to start down a journey of designing using permaculture as their model. Outcomes include employable skills in sustainable landscape design, ecological and agricultural topics and homesteading skills. As well as a new or renewed mindset enabling a sound, ecologically low impact life.

Three Ethics of Permaculture form the core around which the course is taught.

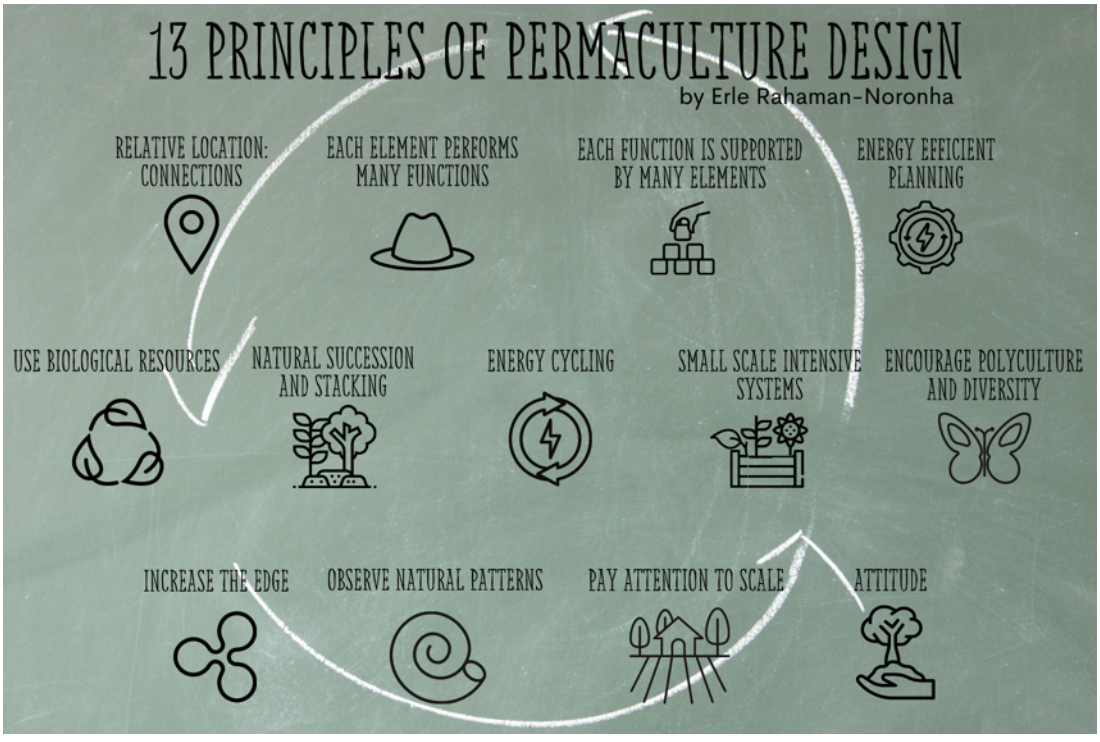
Care for the Earth
This includes all living and non-living things plants, animals, land, water and air

Care for all People
This promotes self-reliance and community responsibility. We need to be mindful to ensure that everyone has access to resources necessary for existence

Care for Community
This requires us to control our population and be disciplined consumers so that we can distribute what is surplus, for the benefit of other people and all life.

The three ethics are translated into actions by the 13 principles of permaculture as taught by Erle Rahaman-Noronha in this course. These principles help establish all the parameters around which a Permaculture landscape is designed.

The 13 principles of Permaculture Design:



Sample Schedule (subject to change reflecting student knowledge level and weather):

Day 1 - Introduction to Permaculture:

Learn how the ethics are translated into actions by following a set of principles. See how these principles have been applied at Walkers Reserve and at other projects across the Caribbean. learn to read landscapes and patterns and create your first designs that will integrate food, water, and shelter in a productive sustainable way. We will change the way you view the world and you will leave this day with your very first permaculture design.

Day 2 – Healthy Soils, Composting and Recycling Waste:

Healthy produce comes from healthy soil. Soils are one of the easiest elements on a site to regenerate. We will look at the chemical, physical and biological aspects of soil. Learn how to do basic analysis of your soils to determine what some of its needs are. We will explore the Walkers Reserve site looking at different soil profiles, plants that grow in particular soils and ways of working with difficult soils. We will learn about composting, compost teas and how to build a functional compost pile.

Forests and nature do not create waste. Waste is something we as humans do rater than create. In Permaculture waste is always considered a resource for another project. The workshop will look at the different waste streams created on a site and how to turn them into resources. You will leave looking at waste in a totally different light.

Day 3 – Reading Landscapes, Patterning in nature and Using Maps:

To create a meaningful design, you need to know the landscape you are working with and the energies flowing across your site. We introduce you to the concepts behind patterns and reading landscapes. Patterns are the frameworks over which most of our behaviors are built. Learning to observe patterns in space and over time allows us to create designs that suit the landscape we are given rather than altering the landscape to suit our design.
The less altering you do the more money you save! Learn to look at high usage areas, seldom visited areas and create templates for your site based on a zone system, where zone 1 is a high traffic area. Designing where to place attention requiring items within your zone system allows you to streamline your efforts, using less energy and having more success.

Day 4 – Water Harvesting and Earthworks:

Water can be the most destructive force on your property. How does our observation of flows and patterns of water across a site influence our designs? How can we aid in sinking it to recharge our aquifers instead of letting it flood straight out to the sea? We explore all forms of slowing, storing and sinking water from rooftop collecting and filtration to large ponds in the landscape. We will learn about earthworks from the scale of a shovel to an excavator. Moving earth is one of the primary and usually most expensive aspects of large designs before other biological systems are put in place. Properly designed earthworks can be extremely durable and cost effective in the long run. We will guide you on the successes and challenges of bringing large equipment onto your property.

We will have hands on exercises to learn the concepts of contour lines, building and calibrating "A-frames" and digging a swale to slowly control and guide water across a landscape. We will explore Walkers Reserve's ponds to learn all about trapping water in a landscape, preventing downstream flooding and building microclimates.

Day 5 – Organic Gardens, Microclimates, Forests and Trees:

We explore the roles of trees in nature and in permaculture designs. What makes up a forest? How does a forest behave? How can we take this information to create an amazing design. The backbone of perennial systems are tree crops and food forests. We go through the process of analyzing fruit and food crops for local situations to create local lists that will yield year round. We explore the roles of plant varieties and cultivars to explore extending seasonal production. We look at different methods of preservation to deal with gluts during fruiting seasons to use out of season.

We look at global climates and why flora and fauna have evolved into bioregions. The concepts of ecosystems and the roles they play in a watershed will be examined. We will examine the roles of microclimates and how they can be observed or how they can be created to increase the biodiversity of a site. Learn how to plan out an organic garden, the correct ways of rotational planting, plants that act as companions to others and how to effectively control pests or reduce their destructiveness using poly-cultures. Explore Walkers Reserve's production beds and learn about alternate tropical greens and rootcrops that grow with little care.

Day 6 – Animals, Aquaculture, Aquaponics, Wildlife Restoration:

All functional ecosystems have an animal component in them. In this workshop we look at wild and farmed animals in permaculture systems which take the well being of the animals into consideration. Allowing farm animals to exhibit their natural behaviors while performing valuable work on a site is the goal. We will explore many different systems discussing the challenges and successes. We will look at aquaculture and aquaponics options for growing food and generating income. We

explore the challenges of creating wildlife habitats in urban areas and the roles wildlife plays in regulating pests in the environment. We will look at bat boxes and mosquito control, visit bee hives and look at how to set up a multi-functional small pond to encourage aquatic and semi aquatic wildlife.

Day 7 – Designing for Disasters, Root crops, Nursery techniques and Vetiver (khus-khus):

Climate change adaptation and mitigation. How do we assess the threat of climate change in the Caribbean? We look at different catastrophic scenarios and create a checklist of how to "disaster proof" our landscape. What can we design into our sites to make them more resilient to hurricanes, earthquakes, fires, floods or droughts? How do we create a landscape that can keep us alive until help arrives? How do we start again after a catastrophe? Rootcrops can be dug up once a hurricane has removed most of the vegetation from a site. Vetiver grass (Khus Khus) can stabilize slopes that have been damaged by storms or fires. Starting a simple nursery is the first thing households and farmers need to do after a storm.

We explore the rootcrops growing at Walkers Reserve and delve into the variety of root crops grown locally with the aid of a local Root Crop expert. We look at propagation and production of sweet potato, cassava, eddoes, dasheen, ginger and turmeric. We learn how to handle, propagate and plant vetiver grass, a permaculture superstar. We look at setting up a small nursery, a variety of methods of propagation.

Day 8 - Introduction to Natural Building and Appropriate Technologies; Permaculture Consultation:

We assess different energy needs required in designed systems and how one can go about finding the appropriate technology that is affordable, simple to build and maintain and is durable.
Students are exposed to current and alternative building designs that utilize local, less energy intensive materials. Take a walk around Walkers Reserve to look at the different natural building techniques trialed. We will show participants how to assess their soils and how to create a construction soil mix. We will all have an opportunity to make mud bricks and if time permits do some earthen plastering on some of our structures.

We will also begin our mock-up design consultation today. Students will be given a client to interview, and a real site to design for. Students will begin the process of completing a permaculture design utilizing all the design aspects which they have learnt through out the course.

Day 9 – Social Permaculture and Invisible Structures; Permaculture Design Skills:

Villages and Land Access: Rules governing land access for all humans are looked at as well as design criteria controlling villages. Most food producers are small scale farmers that do not have land tenure. Different systems of land use and tenure are analyzed to determine what systems are sustainable and what systems lead to land abuse and deterioration.
Bioregional Cultural Work: Students are exposed to the concepts of bio-regions and bioregionalism. Supply chains and food miles are analyzed and solutions of reducing these by sustainably harvesting are analyzed.
Settlement: Criteria are looked at for what makes successful settlements and what are the historic and cultural limits that evolved in establishing them.
City Design: Case studies are analyzed of what have shown to be successful cities that are sustainable and that have evolved or are designed using the principles of Permaculture.
Urban Strategies: Making cities more self sufficient, reducing the ecological footprint through multi use zoning.
Economics and Money: The current economic system is analyzed and alternative economies and more sustainable systems looked at that exist globally.

Design skills / consultation : We will do a review of all the design methodologies used during the preceding days, go over the challenges of creating a successful design, design skills, and consultation strategies. Students can optionally work in teams and are encouraged to spend as much time as possible on their sites, carry out all the observations of the landscape, flora and fauna.

Day 10 - Final Presentation; Course wrap up:

The task as a Permaculture Designer is to come up with solutions to the existing problems, designs that meet the permaculture guidelines, ethics and principles while serving the desires of the client and making recommendations for further phases of the project. A final permaculture design for the site will be sketched and a presentation made to the client at the end of the course.

Students will walk away with a fresh view of the natural world and their connection to it. Feeling capable of making positive impactful environmental changes no mater their current role, occupation, living situation or income level.