

UNIVERSITY OF NAIROBI COLLEGE OF AGRICULTURE AND VETERINARY SCIENCES WANGARI MAATHAI INSTITUTE FOR PEACE AND ENVIRONMENTAL STUDIES

WMI CAMPUS EXPERIENTIAL LEARNING GUIDE

1. About Wangari Maathai Institute for Peace and Environmental Studies (WMI)

The Wangari Maathai Institute was established in 2009 as a Center of Excellence in Environmental Governance and its linkages with peace and democracy within the College of Agriculture and Veterinary Sciences. It was established in close collaboration with the 2004 Nobel Peace Prize Laureate, Professor Wangari Muta Maathai to immortalize her considerable achievements as an uncompromising environmental conservationist, advocate for better natural resource utilization practices, a tireless champion for democracy and good governance and a committed campaigner for cultures of peace among other distinguished achievements.

Vision

Excellence in experiential learning, transformational community outreach, and research for sustainable environments and cultures of peace

Mission

To cultivate positive ethics, values and practices towards the environment by training stewards who foster peace, promote holistic sustainable development, and link theory with practice.

The Institute offers a Master of Science (M.Sc.) degree in Environmental Governance and a Doctor of Philosophy (PhD) degree in Environmental Governance and Management. Short professional courses are also offered such as "Integrated environmental impact assessment. The Institute has academic and research partnerships locally and around the world.

Apart from the built-up areas, the Institute continues to develop experiential learning platforms such as herb garden, demonstration plots for forest protection, wetland preservation, good land management practices and recycling of gray and black water.

2. Activities planned for you

Below is the list and brief description of learning activities that have been prepared for your experiential learning at the Institute.

Activity	Description
2.1 Video - Taking Root: The Vision of Wangari Maathai	Professor Wangari Maathai was deeply
	concerned with domestic energy challenges and their connection with environmental conservation and protection, women empowerment and poor governance. She saw the entry point for mobilizing and working with communities to address the environmental challenges as the tree – from tree nursery - to growing the tree - to environmental conservation - to improvement of livelihoods. She was also concerned with natural resource governance. " <i>To work with communities, you need passion</i> "
	and "tree planting campaign is a little more
	than planting of trees; it is planting of ideas"
<section-header></section-header>	 The WMI was designed to be a functional and inspiring hub of activities in natural resource management especially in its aesthetics and environmental considerations. The building design makes optimal use of natural lighting, natural ventilation with proper orientation to the sun and prevailing winds. The campus has the following features: Solar façade to provide for warm air through greenhouse effect¹ – Kabete can be cold at times Self-cleaning glass roofing for natural lighting² Drinking water fountains at several points to eliminate plastic bottles on site Solar water heating for wash hand basins Double piping for clean water for wash hand basins and untreated water for toilet flushing Solar lifting – for street and amphitheatre to save energy Rest areas for mediation and group discussions Appropriate water harvesting and erosion control techniques have been used.
	 A foot-path for "walking meetings An open-air amphitheatre for performance – to share knowledge

¹ The greenhouse effect works ... like a greenhouse – it stays warm inside, even during the cold season.

 $^{^2}$ Glass used has an ultra-ultra-thin coating of titanium dioxide nanoparticles to make the surface of glass to reject dirt (especially carbon-based), and so become "self-cleaning".

2.3	Blue	economy	and	why	it i	s im	portant



21 June, 2019 PS Ministry of Foreign Affairs and UNDP Representative handing over to WMI 35 Modular Boards used during the Sustainable Blue Economy Conference held in November 2018 in Nairobi



through songs, poetry and drama performances

The building is expected to excite and inspire interest in protection and conservation of nature. The building has a sense of Pan Africanism. The naming of the spaces in the building reflect Kenyan and pan-African distinguished personalities, important indigenous vegetation, main "water towers" and other natural heritage themes. The building has peace labs for negotiations and conflicts resolution under a mediator. It has democratic spaces where people can mingle and exchange their worldviews on democracy, peace and environmental governance, exhibit the work and walks of Prof. Wangari Maathai as well as display modular boards for the blue economy for experiential learning.

All economic activities related to oceans, seas and coasts. Blue economy covers a wide range of interlinked established and emerging sectors – aquaculture, fisheries, fish processing, coastal tourism; ports, warehousing and water projects; ship building and repair, maritime transport, marine extraction of oil and gas, blue bio-economy biotechnology, freshwater and marine environmental protection, ocean energy etc.



Kenya, Canada and Japan hosted the first ever global conference on sustainable blue economy in November last year.

an architectural master This is piece embodying Prof. Wangari Maathai's ideals and concepts of intergenerational, pan-African and global cooperation in environmental governance, democracy and cultures of peace for a stable society. Notice model of three leaves (large, medium and small). The large leave signifies established environmental and governance icons like Prof. Wangari Maathai; the medium leaf signifies the next generation of experts and practitioners carrying forward Prof. Wangari Maathai's legacy while the small leave represents the younger generation being nurtured to future environmental



³ Reverse osmosis is a process of removing dissolved impurities from water by passing it through a semi-permeable membrane. Semi-permeable membrane allows passage of certain ions only and others are rejected thus forming a low concentration (permeate) stream and a high concentration (reject) stream.

<image/> <caption></caption>	 and creating peace and love among the Kenya communities. Opposite, <i>Syzgium guineense</i> was planted to represent the Wardei of Kenya. Local name: Mzambarau (Swahili). The Wardei tribe is found in Garissa and Tana River counties and are nomadic pastoralists. The Wardeis are predominantly Muslim. Uses: Firewood, charcoal, furniture, poles, tool handles, boat building, edible fruit, medicine, fodder (leaves), bee forage, shade, ornamental, dune fixation, wind break, tannin and dye.
2.8 Managing grey and black water	The system is a "decentralized sewage treatment and recycling plant (STP)" named as "ENPURA UG 450PE" (supplied by Bioliff Co.). Stages in the waste water treatment:
	 Primary treatment – waste water is gravity-fed into the primary treatment tank. The effluent then passes through a brush filter to the second tank of the primary treatment to ensure no solids enter the reactors. Buffer tank – the buffer chamber regulates amount of effluent that is fed into the reactor tanks. Aeration reactors – bacteria lodge onto the fixed film media. The organisms grow, living on the nutrients present in the waste water and through introduction of the correct volume of oxygen. Clarifier tank – Effluent passes into the clarifier where sludge settles at the bottom and clear water separates at the top. Storage tank – the final product is a clear, odourless and sterilized effluent ready for discharge either by means of irrigation or returning it to the environment.
2.9 Herbal Garden	The outdoor herbal garden is under establishment. Different herb plants with known culinary, aromatic and medicinal values will planted at a designated part of the campus.



Contact

Wangari Maathai Institute for Peace and Environmental Studies College of Agriculture and Veterinary Sciences University of Nairobi Off Kapenguria Road P.O. Box 30197, Nairobi, Kenya Email: <u>wmi@uonbi.ac.ke</u> http//www.uonbi.ac.ke/institutes/wmi