Agroecosystem Restoration for Resilience in East Africa and Great Lakes (EAGL) Region

Regional Economic Inclusion Exchange Meeting

November 2020

Nairobi

Natalie Topa / Regional Resilience and Livelihoods Coordinator

East Africa and Great Lakes Region

BRINGING PERMACULTURE BASED DESIGN TO OUR WORK WITH DISPLACEMENT AFFECTED POPULATIONS

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- Permaculture is a systems-based design science applicable to the architecture, infrastructure, town planning, agroecology, agroforestry and land restoration. Its about designing to optimize all resources and flows around you.
- Working with Refugees, Internally Displaced Communities (IDPs), Returnees and Host Communities to create Resilient Households, Resilient Farms and Resilient Landscapes.
- As ecologies collapse, they take livelihoods, stability and security with them
- Using design to buffer communities from extreme climate and weather events
- Enhancing food, water and energy security
  - Recharging ground water systems and long term soil hydration
  - Establishing chemical free, agro-biodiverse and regenerative food systems with perennial stability
  - Increasing energy security (trees and diversified energy options)

THE STORY OF PLACE

WHAT WAS THIS PLACE LIKE BEFORE? HOW DO YOU WANT IT TO BE IN THE FUTURE?

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COMMUNITY RESOURCES COLLECTION AND KNOWLEDGE EXCHANGE

SEEING ALL THE RICHES AROUND US – THE INGREDIENTS OF RESILIENCE

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TOOLS AND SKILLS

MAKING AND USING A-FRAME SURVEY TOOLS. LEARNING TO READ PATTERNS AND FLOWS

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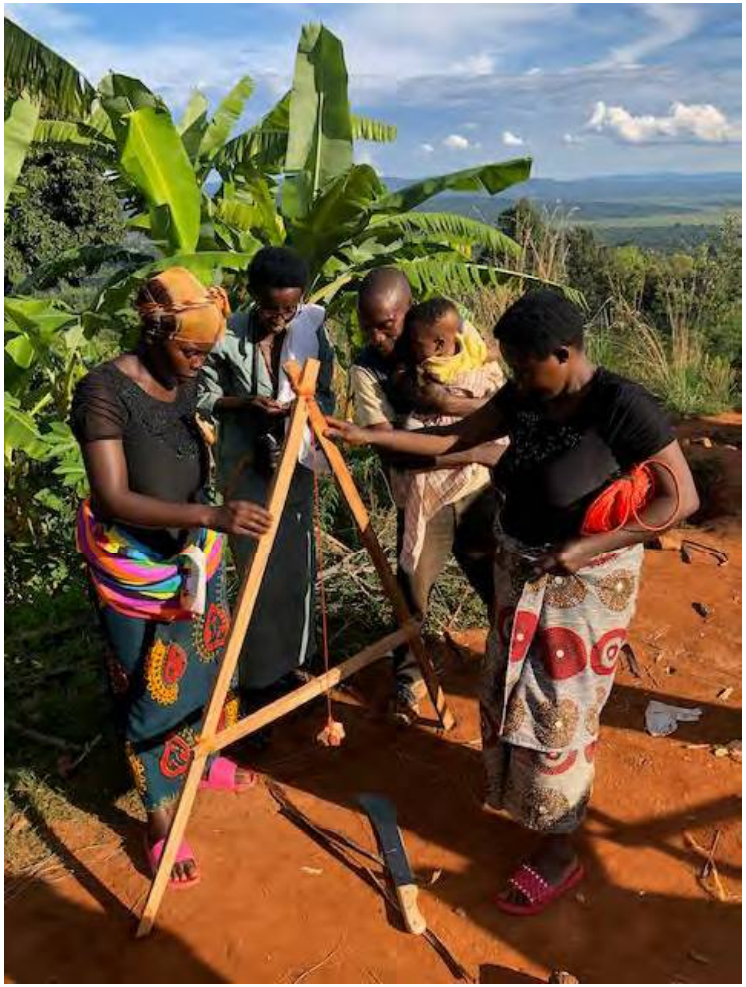

RESILIENT HOUSEHOLDS

PREPARING RESOURCE MATERIALS TO BUILD SOIL HEALTH, SOIL SECURITY AND LONG TERM HYDRATION AND PRODUCTION

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RESILIENT HOUSEHOLDS

HOUSEHOLD FOOD SECURITY AND FLOOD MITIGATION WITH PERMACULTURE DESIGN

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RESILIENT HOUSEHOLDS

MANAGING EXTREME WATER EVENTS AROUND THE HOUSE AND GROWING FOOD

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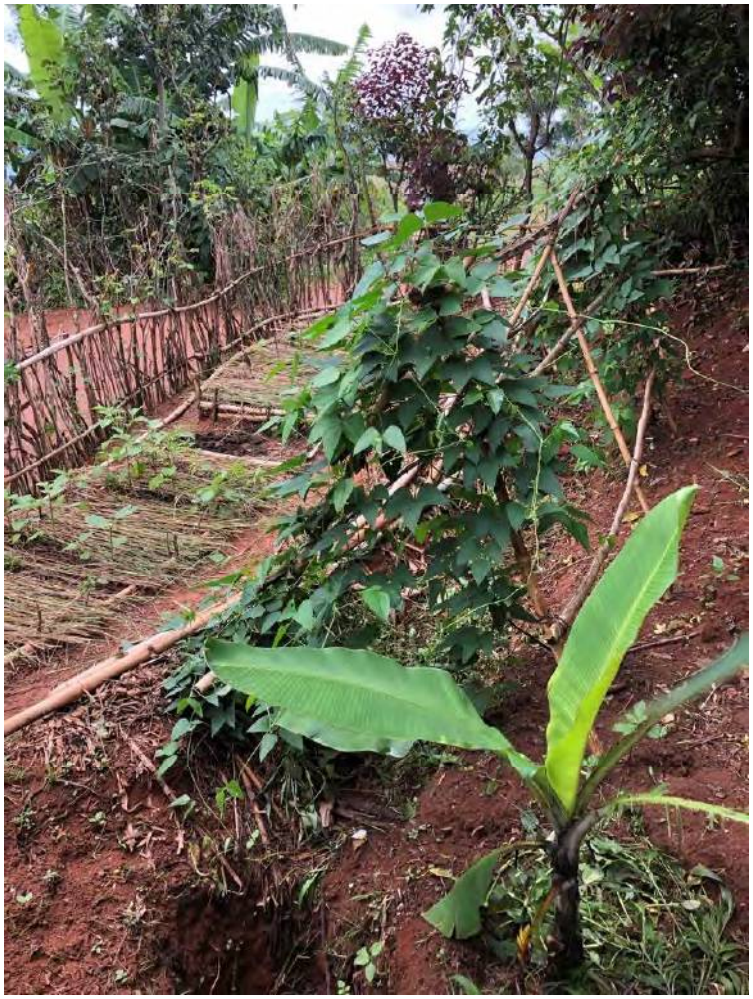

RESILIENT HOUSEHOLDS

USING THE NATURAL PATTERNS OF THE LAND TO CREATE AN OASIS

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RESILIENT HOUSEHOLDS

SMALL SPACE ORGANIC FOOD PRODUCTION IN EXTREME DRYLAND CONDITIONS

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RESILIENT HOUSEHOLDS

GARDENS ARE PLANTED IN BIOINTENSIVE AND DIVERSE PATTERN FOR NUTRIENT SECURITY

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RESILIENT HOUSEHOLDS

GARDENS ARE PLANTED IN BIOINTENSIVE AND DIVERSE PATTERN FOR NUTRIENT SECURITY

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RESILIENT HOUSEHOLDS

BIOLOGICAL UPLIFT, NUTRIENT DIVERSITY, MICRO-CLIMATE AND PERENNIAL STABILITY

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RESILIENT HOUSEHOLDS

BIOINTENSIVE SMALL SCALE PRODUCTION FOR NUTRIENT SECURITY

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RESILIENT HOUSEHOLDS

SLOWING, SPREADING AND SINKING WATER TO PLANT THE RAIN BEFORE PLANTING CROPS

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RESILIENT HOUSEHOLDS

EXPANDING GARDEN FOR MARKET TOMATOES
PASSIVELY HARVESTING WATER AND NUTRIENT

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RESILIENT HOUSEHOLDS

MOVING AWAY FROM EXPENSIVE CHEMICALS AND TOWARDS SOIL SECURITY

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NATURAL PEST MANAGEMENT

INTERCROPPING. LOCAL ORGANIC RESOURCES FOR MAKING INPUTS. SOIL SECURITY.

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TOWARDS SEED SECURITY AND AGROBIODIVERSITY RECOVERY

SPECIES RECOVERY. EMPHASIS ON NEGLECTED, UNDERUTILIZED AND FORGOTTEN CROPS. SUPPORT TO FARMER LED SEED SYSTEMS.

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PATHWATER HARVESTING

SENDING WATER FROM DESTRUCTION TO PRODUCTION –
DIVERTING WATER FROM COMPACTED FOOT PATHS IN TO SWALES ON CONTOUR
TO HYDRATE FARMS

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RESILIENT FARMS – FLOOD/DROUGHT PROOFING

WATER/NUTRIENT HARVEST, EARTH & STONEWORKS, FOOD FORESTRY

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RESILIENT FARMS – FLOOD/DROUGHT PROOFING

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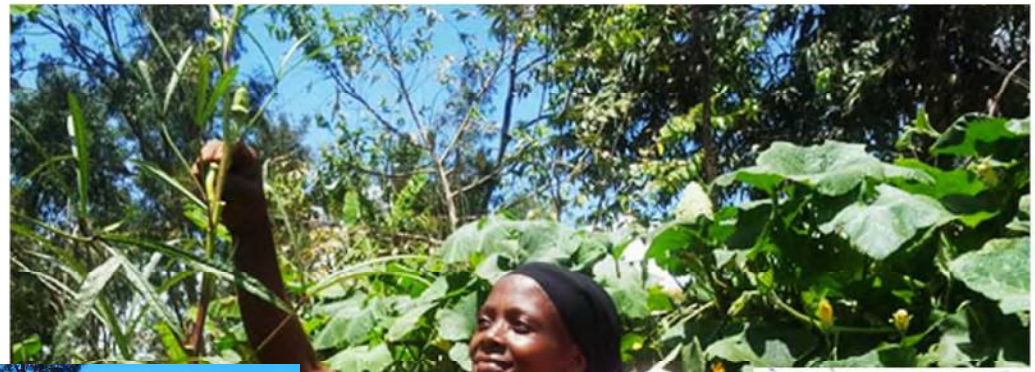

RESILIENT LANDSCAPES - MIXED FOOD FORESTS

TREES PLANTED IN WATER HARVESTING FISHSCALE PATTERN FOR BIODIVERSITY REGENERATION AND FLOOD MITIGATION

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DESIGNING RESILIENT LANDSCAPES

MITIGATING EXTREME EVENTS, PROTECTING SOIL SECURITY AND TURNING FLOODS IN TO FOOD – FOOT PATHS BECOME MASSIVE EROSION GULLIES

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PATHWATER HARVESTING

SENDING WATER FROM DESTRUCTION TO PRODUCTION –
OFF OF COMPACTED FOOTOATH AND IN TO FIELD AND FARMS

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RESILIENT LANDSCAPES AND AGROECOSYSTEMS

DESIGNING FOR DISASTER – FROM DESTRUCTION TO PRODUCTION

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RESILIENT LANDSCAPES– FLOOD/DROUGHT PROOFING

THREE LARGE, TRANS-FARM PRIMARY SWALES CUTTING ACROSS THE MOUNTAIN FOR CAPTURING WATER AND NUTRIENT, HYDRATING FARMS AND REDUCING FLOOD

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RESILIENT LANDSCAPES – PACIFYING EXTREME WATER BEHAVIOR

MITIGATING EXTREME EVENTS, PROTECTING SOIL SECURITY AND TURNING FLOODS IN TO FOOD.

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RESILIENT LANDSCAPES – MITIGATING DISASTER

MITIGATING EXTREME EVENTS, PROTECTING SOIL SECURITY AND TURNING FLOODS IN TO FOOD.

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RESILIENT LANDSCAPES - MITIGATING WEATHER AND CLIMATE EXTREMES

PULLING ENERGY OUT OF WATER FOR FLOODPROOFING AND EROSION CONTROL.
AGREEMENT WITH COMMUNITY AND CUSTOMARY AND FORMAL LEADERS.

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RESILIENT LANDSCAPES - ROAD WATER HARVESTING

PROTECTING MARKET ACCESS WHILE RESTORING COMMUNITY AGROECOSYSTEMS

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RESILIENT INFRASTRUCTURE – PROTECTING INVESTMENTS

PROTECTING MARKET ACCESS WHILE RESTORING COMMUNITY AGROECOSYSTEMS

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RESILIENT CYCLES – HEALING HYDROLOGY, RECHARGING SOURCES

LARGE SCALE WATER CATCHMENT AND INFILTRATION IN TO GROUND WATER RECHARGE

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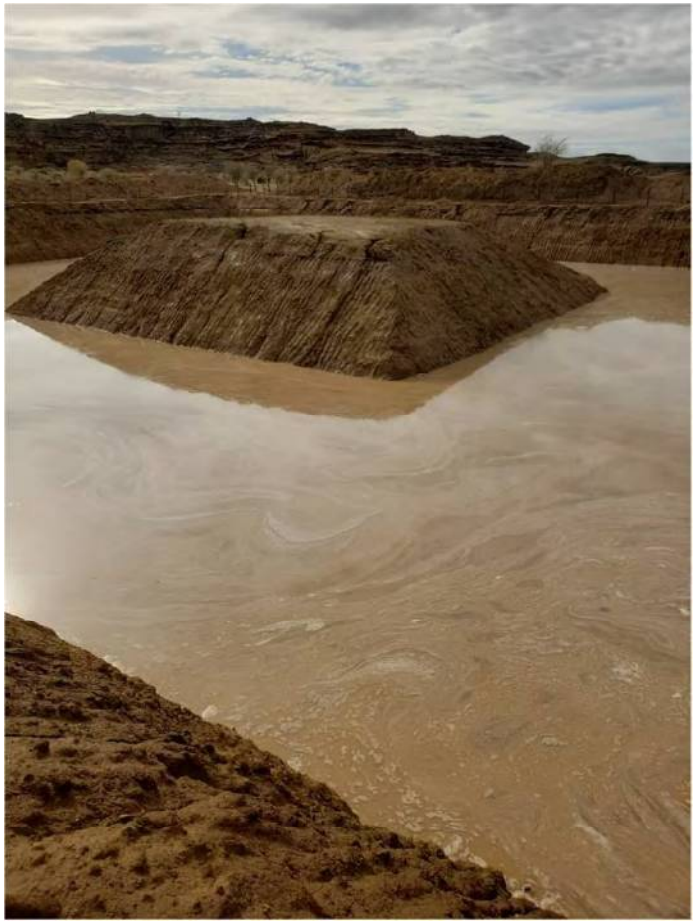

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