CULTIVATING CULTURAL AND ENVIRONMENTAL VALUE

PARADISE PARKING PLOTS COMMUNITY GARDEN

KENT, WASHINGTON | 2022

world relief
WESTERN WASHINGTON

EARTH ECONOMICS

WORLD RELIEF WESTERN WASHINGTON HAS SERVED IMMIGRANT AND REFUGEE COMMUNITIES SINCE 1979

The City of Kent and South King County are home to immigrant and refugee families from around the world. In response to calls for community space, World Relief Western Washington began developing the Paradise Parking Plots Community Garden in 2016, transforming a frequently flooded parking lot at Hillside Church into a vibrant multi-cultural garden oasis and resilience hub.

GARDENS AND GREEN SPACE SUPPORT COMMUNITY RESILIENCE

The Paradise Parking Plots Community Garden supports local and cultural food security, builds relationships, and connects people to the soil of their new home while building resilience and providing flood relief and water quality benefits to neighbors and the Green-Duwamish watershed.

WHO BENEFITS FROM THE PARADISE PARKING PLOTS?

Since 2019, an average of **163** people per year from **31** countries have grown food at the community garden.

*Gardener households have **4** family members, compared to 2.9 per household in City of Kent.*

*Over **35** percent of gardener families are children, compared to 20 percent of the King County population.*

***40** percent of gardeners are English language learners, but 72 percent of King County residents speak only English.*

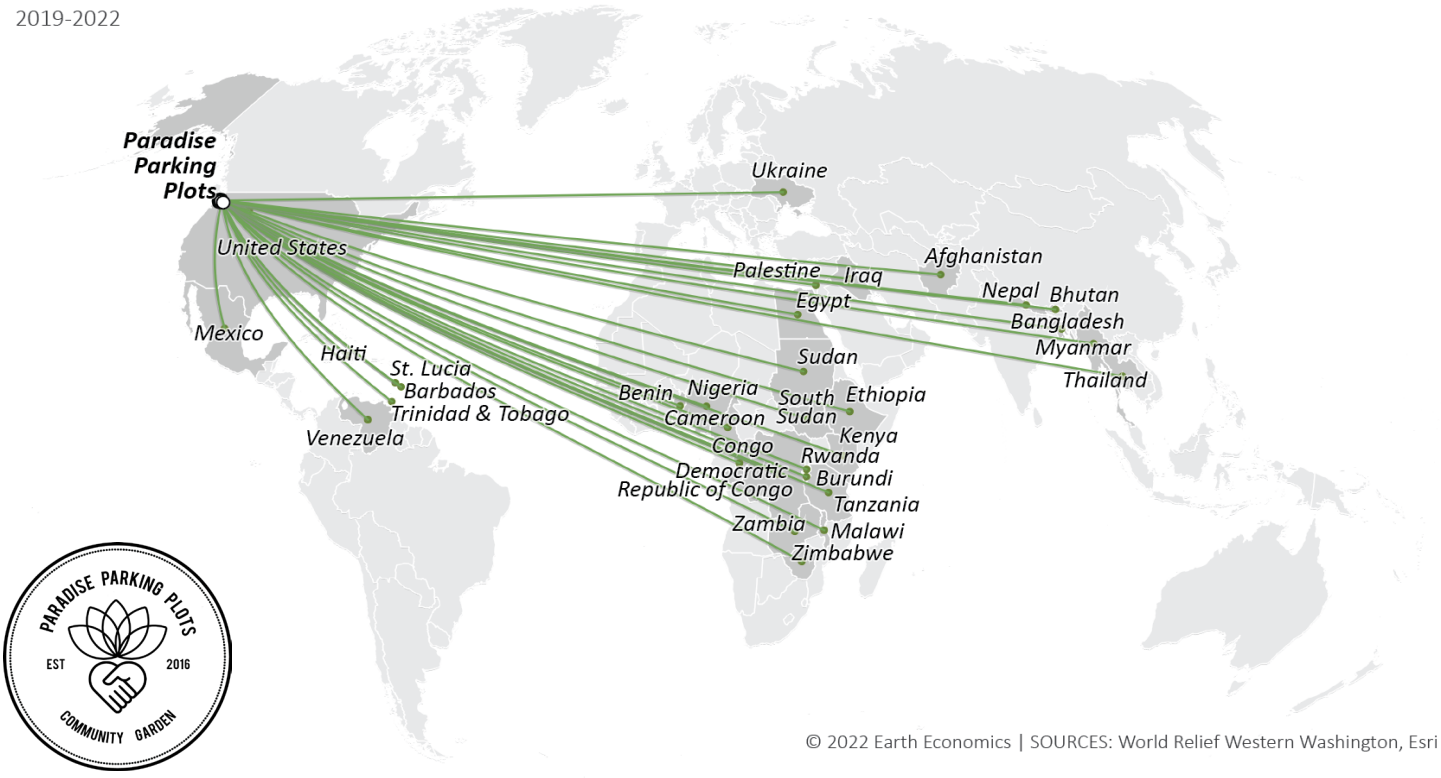
***92** percent of gardeners are low- or very low-income, compared to 39 percent of households in the City of Kent.*

***35** percent of the gardeners qualify for SNAP, compared to 7 percent of King County residents.*

Photo Credits: World Relief

WHERE ARE GARDENERS FROM?

GARDENER'S COUNTRY OF ORIGIN
2019-2022



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HOW FAR DO PEOPLE TRAVEL TO VISIT PARADISE PARKING PLOTS?

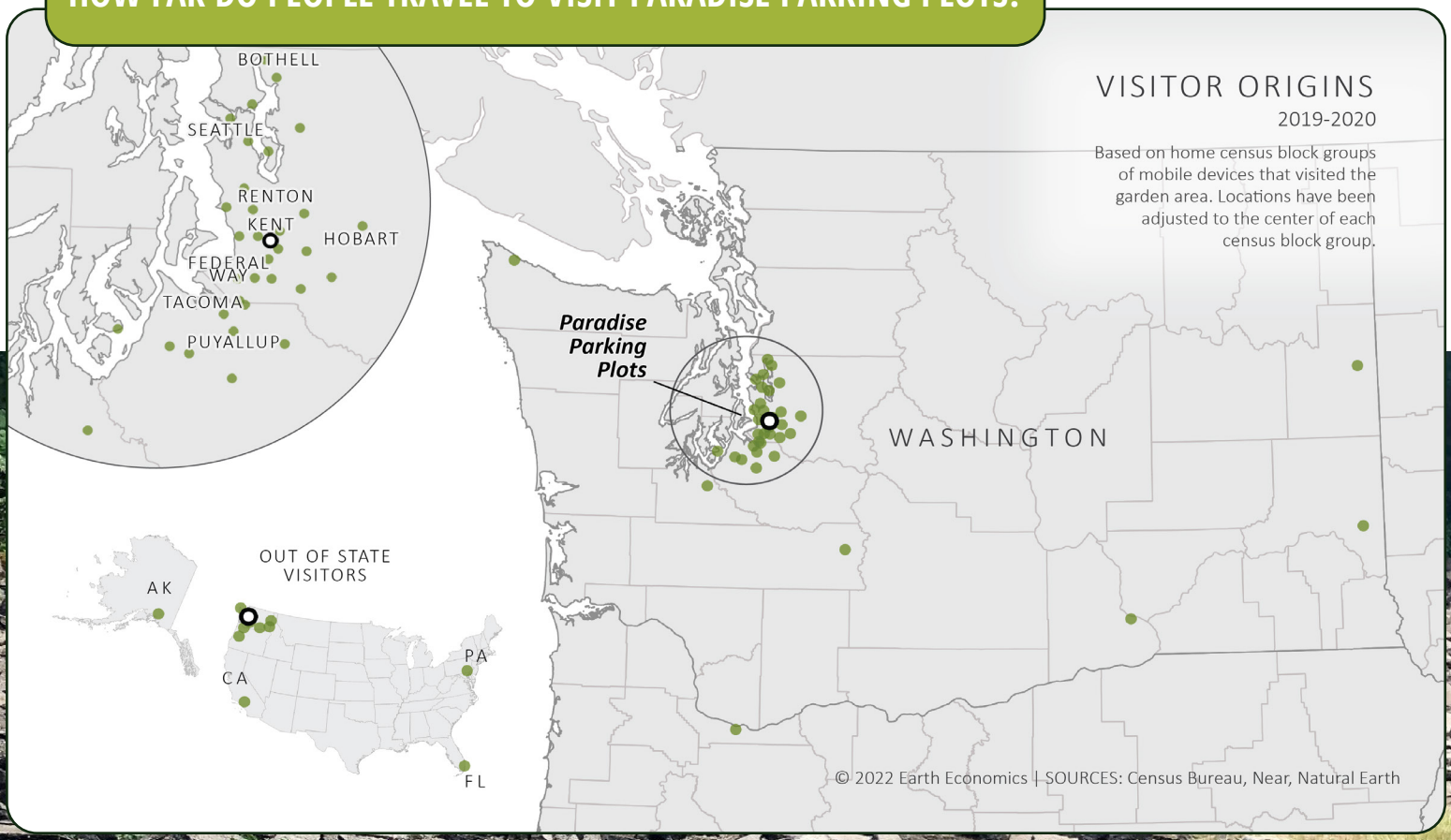

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Photo Credit: World Relief

PARADISE PARKING PLOTS COMMUNITY GARDEN OVERVIEW

Photo Credit: The Watershed Company

PARADISE PARKING PLOT COMMUNITY GARDEN RESILIENCE FEATURES

Over **1,500** volunteers removed more than **50,000** ft^2 of asphalt.

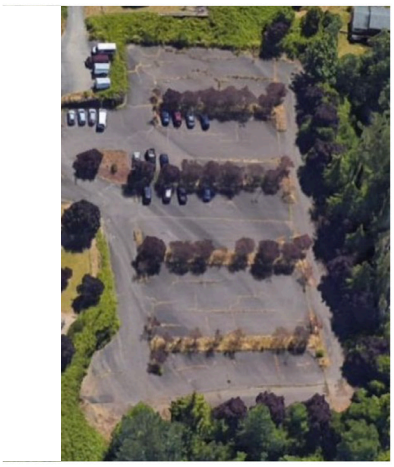
Added features include:

- **50+** garden beds
- **5** rain gardens
- **4** rainwater cisterns
- **1** bioswale
- **1** food forest
- **2** restored hillsides
- **3** composting approaches

The food forest and garden beds provide fruit, vines, and other crops for gardeners to enjoy foods reminiscent of home.

These resilient garden features absorb over **1 million gallons of stormwater per year!**

A DIFFERENCE OF 5 YEARS: 2016 - 2022



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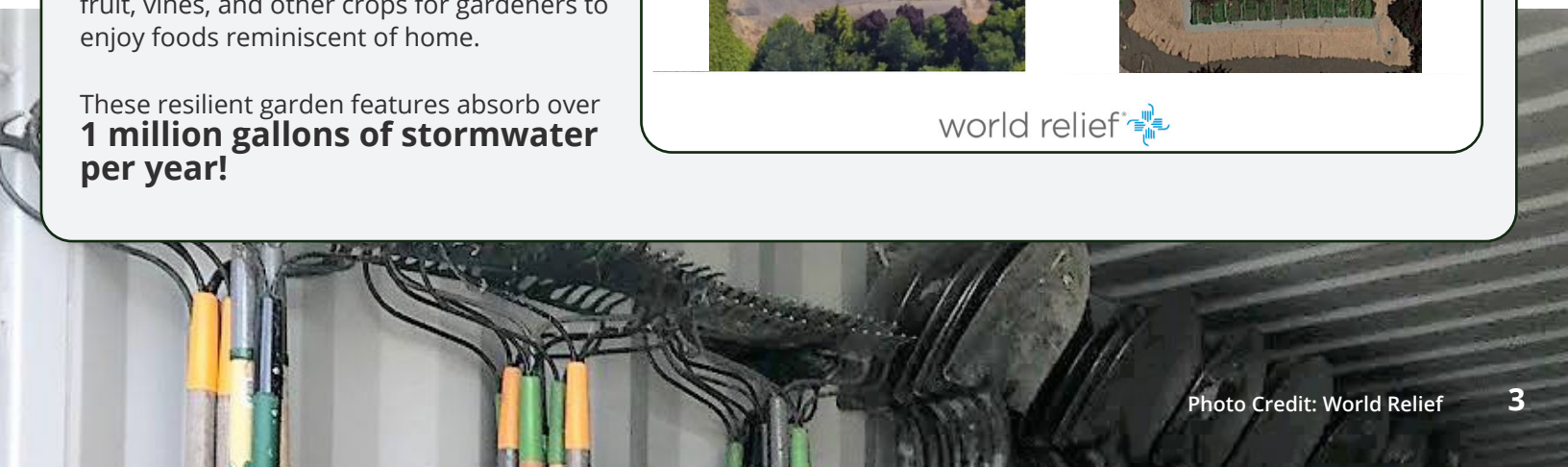


Photo Credit: World Relief

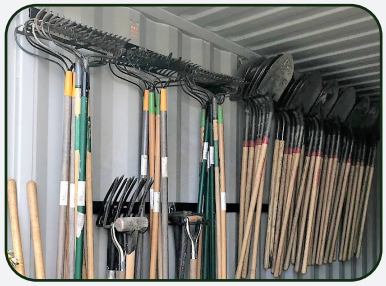
SOCIAL AND CULTURAL VALUES

A World Relief survey asked gardeners

"**What do you like best about Hillside Paradise Parking Plots?**"

VALUE	
Community	*"The sense of community and love among people from different nations and/or communities. This also mainly brought us from Africa together. We loved seeing flags from our mother land gathered together under farming."*
Stewardship	*"The fact of growing my own food and being in contact with the ground once again."*
Welcoming	*"The sense of community & opportunity to build friendships with my neighbors that I wouldn't normally meet."*

VALUE	
Emotional	*"Ability to get my paws in the dirt- my heart is SO joyful after time here."*
Mental	*"It's super relaxing and such a great place for mental clarity."*
Nutritious	*"We eat more organic or fresher food."*



VALUE	
Collaborative	*"I like that we all work as a family. It's the team-work."*
Sustainable	*"I like the whole experience to grow from scratch and eat from what I did with my hands."*
Resilience	*"Share seeds and recipes especially during COVID lockdown when it is difficult to socialize."*

VALUE	
Affordable	*"Growing food organically and saving some money."*
Convenient	*"What I like best about the Hillside Parking Plot was that I got to grow my veggies and fruits without any problems and that I just got to see everyone else work on their gardens."*
Food security	*"I get to plant any vegetables I want and it's very relaxing."*

Photo Credits: World Relief

IMPACT SUMMARY

$1.34 million
secured in grants, gifts-in-kind, donations, and volunteer hours

$15,276
in ecosystem services benefits per year

$127,000
in market value of food grown per year

$12,588
in education benefits per year

1.28
benefit-cost ratio

ESTIMATING THE VALUE OF **ECOSYSTEM SERVICES BENEFITS**

The benefits to people and communities provided by ecosystems — including gardens — are known as ecosystem goods and services. While some may be traded in markets, other benefits — like stormwater capture, improvements to air and water quality, and educational opportunities — are not. Economists are able to estimate the value of these non-market benefits using a variety of techniques, from avoided costs to willingness-to-pay.

ANNUAL ECOSYSTEM GOODS AND SERVICES

AESTHETIC INFORMATION
$12,145

AIR QUALITY
$155

BIOLOGICAL CONTROL
$13

CLIMATE STABILITY
$407

DISASTER RISK REDUCTION
$281

HABITAT
$95

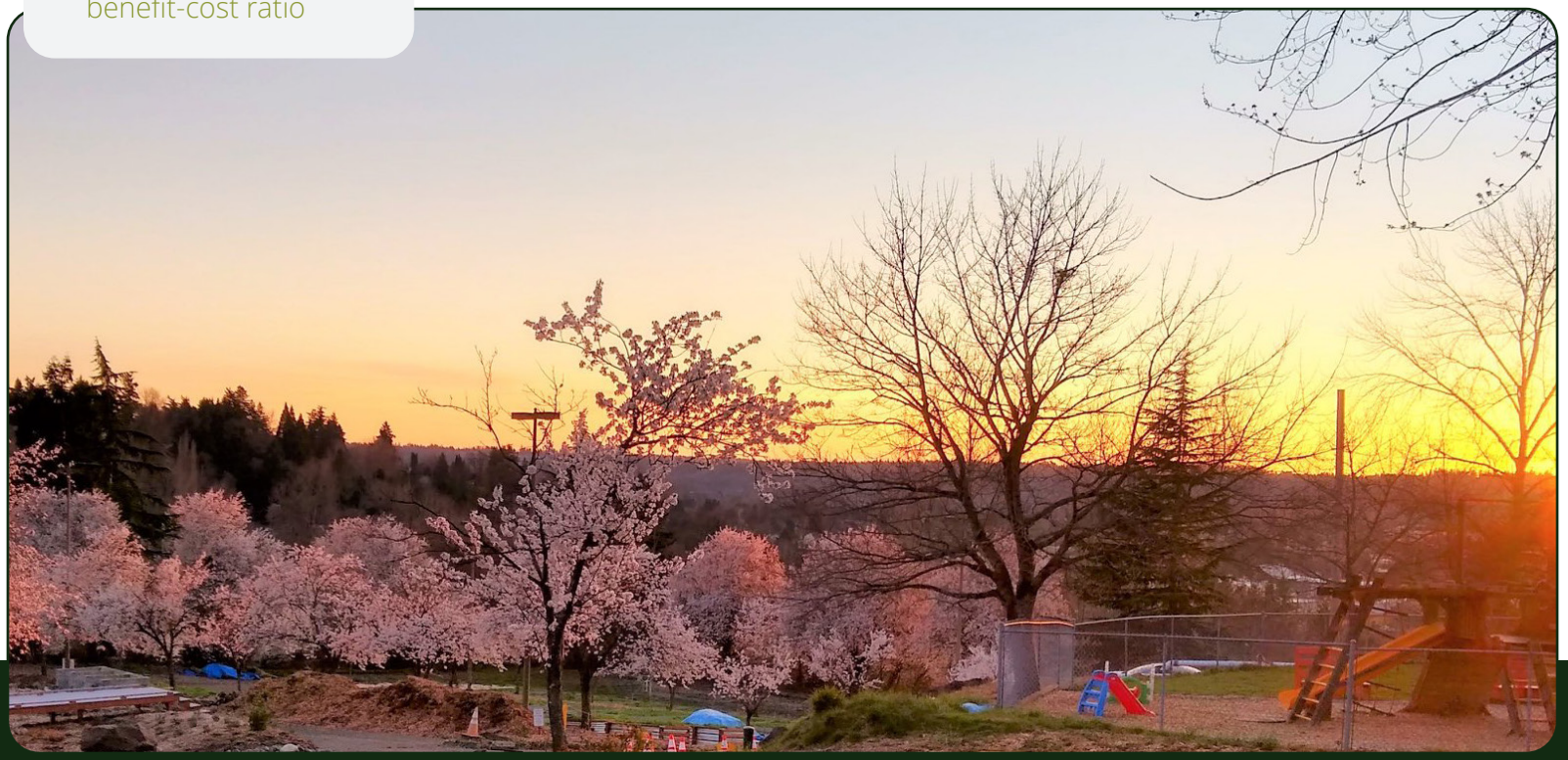
SOIL FORMATION
$4

SOIL RETENTION
$61

WATER SUPPLY
$991

WATER QUALITY
$1,124

Photo Credits: World Relief



BENEFIT-COST ANALYSIS

To provide insights for decision makers and investors regarding the Paradise Parking Plots Community Garden model, the costs that World Relief incurred to develop and maintain the garden (capital investments, operations, maintenance) were compared with the benefits as estimated by Earth Economics (both market and nonmarket benefits). Over 30 years, the net present value of benefits total **$3.64 million** and costs total **$2.84 million** (discounted at 1.6 percent). This results in a benefit-cost ratio of **1.28**—meaning that $1.28 in benefits are generated for every $1 expended on the garden.

Photo Credit: World Relief

GAP ANALYSIS OF ESV PER LAND COVER TYPE AT PARADISE PARKING PLOTS COMMUNITY GARDEN

ECOSYSTEM GOODS AND SERVICES	CULTIVATED	TREES	SHRUBS/ GRASSES	POLLINATOR STRIP	RAIN GARDENS/ BIOSWALE
PROVISIONING					
Food	○	○	○	○	○
Medicinal Resources	○	○	○	○	○
Ornamental Resources	○	○	○	○	○
Energy and Raw Materials	○	○	○	○	
Water Storage	○	○	○	○	○
REGULATING					
Air Quality	○	●	●	●	○
Biological Control	●	●	○	●	○
Climate Stability	●	●	●	○	○
Disaster Risk Reduction	○	○	○	○	●
Pollination, Seed Dispersal	○	○	○	○	○
Soil Formation	●	○	○	○	○
Soil Quality	○	○	○	○	○
Soil Retention	●	○	○	○	○
Water Quality	○	●	●	●	●
Water Supply	○	●	○	○	●
Navigation					
SUPPORTING					
Habitat and Nursery	○	●	○	○	○
INFORMATION					
Aesthetic Information	○	●	●	●	●
Cultural Value	○	○	○	○	○
Recreation and Tourism	○	○	○	○	○
Science and Education	○	○	○	○	○

● = INCLUDED IN ESV ○ = PRODUCED, BUT NOT VALUED BLANK = NOT PRESENT

LIMITATIONS

The value of these benefits is a conservative estimate, as valuation estimates were available for just 10 of the 20 ecosystem services known to be produced by the garden (see the GAP analysis). As researchers address these gaps, these estimates can be expected to increase. Moreover, benefits with strong cultural and community significance are often challenging to quantify. These estimates should serve as a starting point for conversations about the full value of community gardens, and the effects of transforming urban lands into vital green spaces.

Photo Credit: Earth Economics

FUTURE CONSIDERATIONS

These social, ecological, and economic benefits can be expected to increase over time. Development of dedicated educational spaces increases hands-on knowledge-sharing opportunities for both youth and adults.

Kent City Code 7.05.150 allows for water utility rate reductions by replacing impervious surfaces with garden beds, rain gardens, a bioswale, and rainwater harvesting cisterns. The value of the stormwater retention elements at Paradise Parking Plots have been estimated at over $4,500 per year, but has been excluded from this analysis.

Paradise Parking Plots provides a model to the City of Kent and the broader Puget Sound region for cultivating community and environmental benefits from underutilized lands. Urban green space is needed to address risks aggravated by climate change—including urban heat, increased stormwater pollution, and community displacement. World Relief demonstrates the type of projects that are needed to promote an equitable and resilient future for Puget Sound communities, especially for those relocating to the region from around the world.

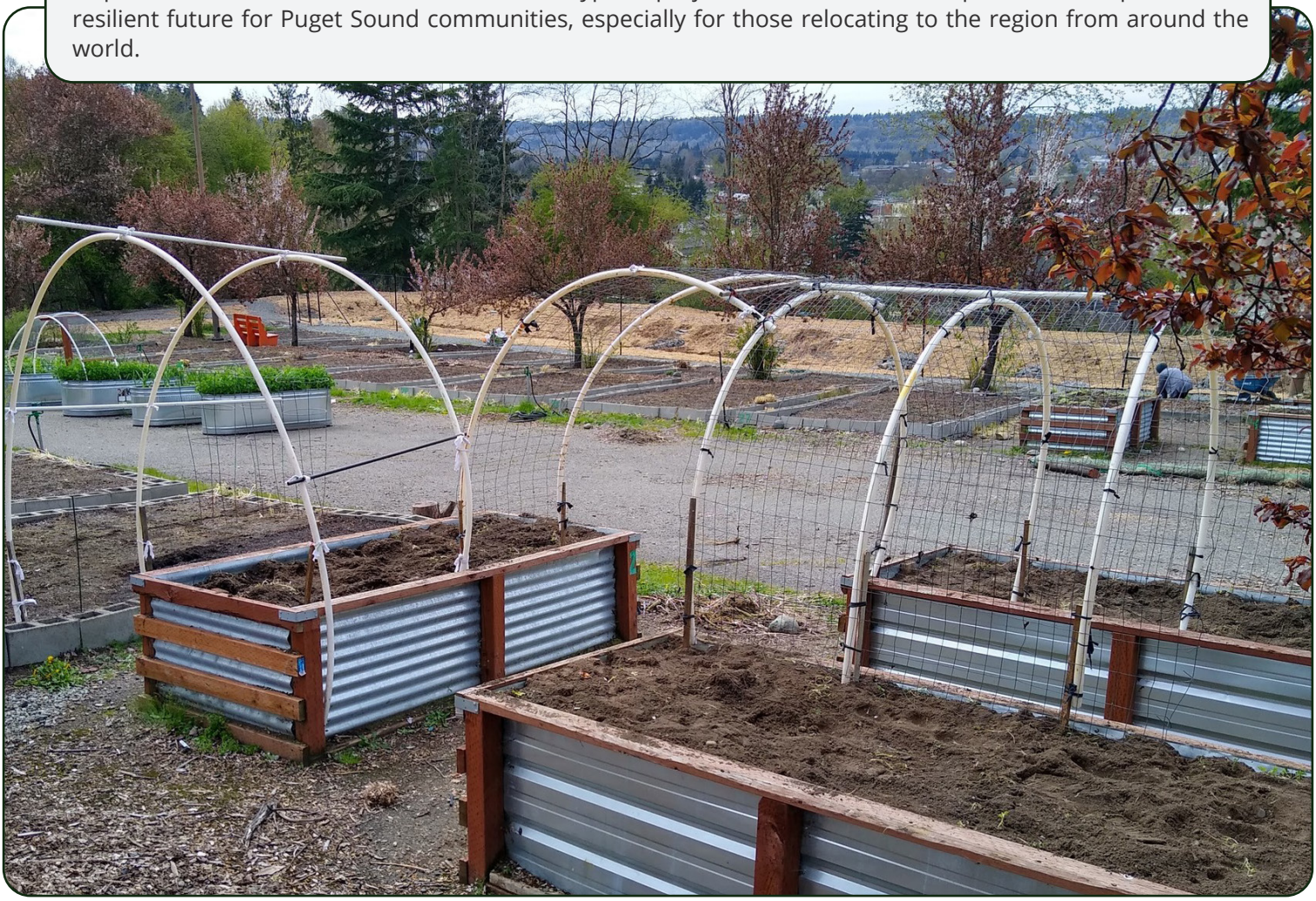


Photo Credit: World Relief

This project was completed in partnership with World Relief Western Washington, with generous support from GiveBig donors and the Ingrid Rasch Legacy Fund.

Earth Economics acknowledges that we operate on the lands of the Coast Salish peoples, specifically the ancestral homelands of the Puyallup Tribe of Indians, and the 1854 Medicine Creek Treaty. We also recognize Paradise Parking Plots exists on the ancestral homelands of the federally unrecognized Duwamish Tribe and the 1855 Point Elliot Treaty.

Earth Economics works to quantify and value the benefits nature provides - our work drives effective decisions and systemic change through a combination of education, natural capital analysis, and policy recommendations.
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