Making Markets Work

Carrie Sanneman
Enabling Markets

- **CLEAR GOALS:** Actionable and linked to solving problems
- **NEW BUYERS:** Law/regulation, businesses, or funders that are on board
- **CLEAR RISK:** Third parties willing to finance and deliver compliance-grade projects
- **CLEAR PATH:** Approved standards and protocols for measuring benefits and implementing and verifying projects
Enabling Markets

**Impact for Investors**

**New buyers**

**Ground rules for all participants**

**Measure and calculate impact of investment**

**Real world examples, data for decisions**

**Builds capacity in the marketplace**

**Replicate deals, make them boring**

**WP Actions**

**Policy/regulatory framework**

**Quantitative tools & metrics, protocols**

**Pilot projects**

**Network collaboration**
Water Quality Trading
Tualatin River, Oregon

Restoration for compliance, converting...

Cooling Towers

> $100 million

50+ miles of restoration

Additional instream flow

$6 million

Source: The Freshwater Trust
Thermal load in the Tualatin River
Investing how Mother Nature would

Source: data - www.deq.or.state.us;
Image - The Freshwater Trust
Clear Path

Linking actions to outcomes
Clear Path

Linking actions to outcomes
Crediting Protocol

Quantification = Translation = Investment

What did you do?

• Practices installed
• Acres treated
• Lbs of Nitrogen, Phosphorus, Sediment
Scaling Through Networks

From Pilot Project to Business as Usual

National Network on Water Quality Trading
Building a Water Quality Trading Program: Options and Considerations

- Reference publication
- Point-nonpoint trading
- 11 elements of trading
- Detailed options, pros and cons
- Examples
- Consistent definitions and language
Realizing the links between Health and Nature
Communities of color, low-income communities, people with disabilities, and other vulnerable groups face barriers to spending time in the outdoors and are also more likely to experience health disparities than white, middle- and high-income people.
We can make the link between health and outdoors explicit

- Closer, safer, cleaner greenspace increases physical activity

- Planting trees strengthens social cohesion

- Time outdoors improves mental health

- Trees clean air
We can make the link between health and outdoors explicit

1. Reduced stress
2. Better sleep
3. Improved mental health: reduced depression, reduced anxiety
4. Greater happiness, well being, life satisfaction
5. Reduced aggression
6. Reduced ADHD symptoms
7. Prosocial behavior and social connectedness
8. Lower blood pressure
9. Improved post-operative recovery
10. Improved birth outcomes
11. Improved congestive heart failure
12. Improved child development, cognitive, motor
13. Improved pain control
14. Reduced obesity
15. Reduced diabetes
16. Better eyesight
17. Immune function
18. Improved general health: adults, children
19. Reduced mortality
20. Asthma and/or allergies
Hospitals & Community Health Needs

Common Health Priorities - City of Seattle Hospitals

- Culturally Relevant Care/Racial Health Disparities: 9
- Obesity: 8
- Health Care Access: 7
- Chronic Conditions: 6
- Mental Issues/Access: 6
- Substance Abuse: 3
- Poor Transportation Options: 3
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“This literature reveals an extraordinarily broad range of benefits, albeit with varying levels of evidentiary support… We propose a research agenda on nature contact and health, identifying principal domains of research and key questions that, if answered, would provide the basis for evidence-based public health interventions.”

Frumpkin et al. 2017 Nature Contact and Human Health: A Research Agenda
Still a lot we don’t know

Research priorities

• How exactly does time in nature make you healthier? Is it a reduction of stress, immune system response, or something else?

• How can we best measure the “exposure” to the healing power of nature?

• What is the right “dose” of nature? What are the best ways to study the epidemiology of nature?

• Not everyone reacts the same to being outdoors in nature. What are the responses of different populations and people with different experiences with nature?
Still a lot we don’t know
Research priorities

• Does a video of nature provide similar benefits from a hike in the woods? How does technology enhance or hinder the health benefits of nature?

• Are there healthcare savings from more time in nature? How cost-effective is time in nature relative to other health actions?

• What are the design “prescriptions” on how best to design schoolyards, parks, trails, and programs that connect people and nature?
<table>
<thead>
<tr>
<th>Opportunity</th>
<th>Possible actions</th>
<th>Potential health benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Benefit, Natural, and Surplus Lands</td>
<td>Acquisition/siting, Repurposing/design, Programming/maintenance</td>
<td>Air quality, mental health, physical activity, social cohesion</td>
</tr>
<tr>
<td>Trails &amp; green infrastructure linkages</td>
<td>Vegetation (buffers &amp; complexity); Siting in EEI focus areas</td>
<td>Air quality, mental health, physical activity, social cohesion</td>
</tr>
<tr>
<td>Volunteer programs</td>
<td>Led by traditional healthworkers</td>
<td>Mental health, physical activity, social cohesion</td>
</tr>
<tr>
<td>Food waste diversion</td>
<td>Linking food and utility bill security programs</td>
<td>Mental health, nutrition</td>
</tr>
<tr>
<td>Community engagement and leadership</td>
<td>Community liasons, updated public involvement processes</td>
<td>Mental health, social cohesion</td>
</tr>
<tr>
<td>Provide more information</td>
<td>Multi-benefit opportunity mapping; Expand definition of green</td>
<td>Air quality, mental health, physical activity, social cohesion</td>
</tr>
<tr>
<td>Changing definitions of greenspace to include more</td>
<td>infrastructure to includes spaces that promote physical activity and relaxation</td>
<td>Mental health, physical activity</td>
</tr>
</tbody>
</table>
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### WP Actions

- Policy/regulatory framework
- Quantitative tools & metrics, protocols
- Pilot projects
- Network collaboration
Thank You

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