PEOPLE

Unlimited

Hivos
people unlimited
Hivos works towards an **open society** with *freedom, diversity and equal opportunities* for all. We offer a platform for every person and every opinion, and ensure that power can be challenged and redefined.

Hivos works towards a **green society** that has no expiry date. A society powered by *renewable energy*, where everyone has sufficient, nutritious and affordable *food*. 
Measuring beyond carbon impacts

Gold Standard Conference
14 April 2016
Measuring beyond carbon impacts

W+ Standard

Six domains:

✓ Income & Assets
✓ Time
✓ Education & knowledge
✓ Leadership
✓ Food security
✓ Health

Indonesia Domestic Biogas Project
Measuring beyond carbon impacts

W+ Standard

1) PIN -> Time Savings (start)

2) PDD 2 provinces of 9
3) Monitoring Report
   4,452 women
   (households)
   - 2,005,245 units

4) Social Audit Report

Recommendations for empowerment actions
(income & assets, leadership)
Biogas and Clean Cooking Conference

Session: Biodigesters and Clean cooking

5-7 April
Addis Ababa

By Eric Buysman
# Tools and pollutants

<table>
<thead>
<tr>
<th>Tool/Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EL-CO</strong></td>
</tr>
<tr>
<td><strong>UCB-PATS</strong></td>
</tr>
<tr>
<td><strong>Exposure measurement</strong></td>
</tr>
<tr>
<td><strong>Kitchen measurement</strong></td>
</tr>
<tr>
<td><strong>Ambient air measurement</strong></td>
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</tbody>
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<table>
<thead>
<tr>
<th>Pollutants</th>
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</thead>
<tbody>
<tr>
<td>CO and PM2.5</td>
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<table>
<thead>
<tr>
<th>Measurement Duration</th>
</tr>
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<tbody>
<tr>
<td>48 hour measurement for PE, KAP and Ambient air</td>
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</tbody>
</table>
**Kitchen Air Pollution (KAP)**

**KAP PM 2.5 (HIVOS and Berkeley study)**

Berkeley AAP is the average of an urban and isolated rural value. No AAP value of the biogas village was recorded.
Berkeley AAP is the average of an urban and isolated rural value. No AAP value of the biogas village was recorded.
# Health benefits

- **Household Air Pollution Intervention Tool**

  HAPIT 2.0, based on GBD 2010 data (but with calculations with 10 years time span, method approved by HAPIT staff)

Usage data from VGS project (n=315 hh)

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Digesters</th>
<th>Usage rate</th>
<th>Averted deaths</th>
<th>aDALY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Realized 2006-2014</td>
<td>22,117</td>
<td>88%</td>
<td>29.5</td>
<td>1,442</td>
</tr>
<tr>
<td>Projection 2014-2020</td>
<td>37,117</td>
<td>82%</td>
<td>21</td>
<td>1,077</td>
</tr>
<tr>
<td><strong>sum</strong></td>
<td><strong>52</strong></td>
<td></td>
<td><strong>2,519</strong></td>
<td></td>
</tr>
</tbody>
</table>
Thank you!

Harry Clemens
hclemens@hivos.org

Improve lives with healthy kitchens and green fields!

www.hivoscarboncredits.org