



**COMMUNITY-DRIVEN
REGULATION AND
LANDFILL OPPOSITION IN
VIETNAM**

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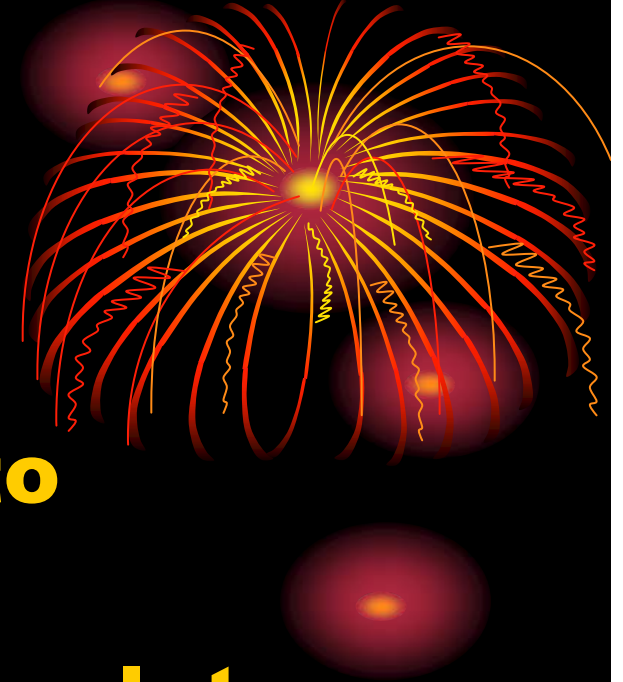
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Background

- **Increasing opposition to landfills in Vietnam**
- **Weak environmental regulatory regime**
- **No research on opposition to noxious public facilities**



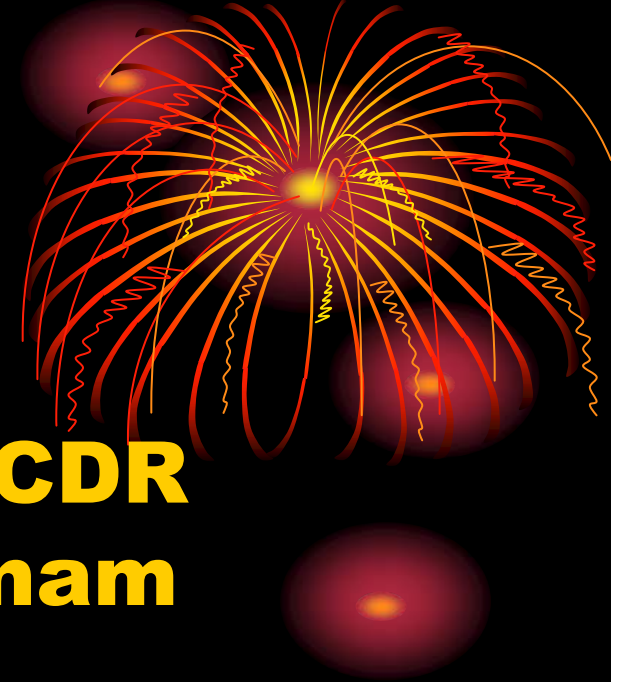
Community-Driven Regulation



- Communities pressure factories, environmental agencies to reduce pollution; raise awareness of environmental issues (O'Rourke 2004)
- Informal regulation (Phuong & Mol 2004, Hettige et al. 1996, Pargal & Wheeler 1996)
- Problem-based coping (Lazarus & Folkman 1984)

Objectives

- **Examine the nature of CDR around landfills in Vietnam**
- **Assess the effectiveness of CDR in reducing pollution from landfills**



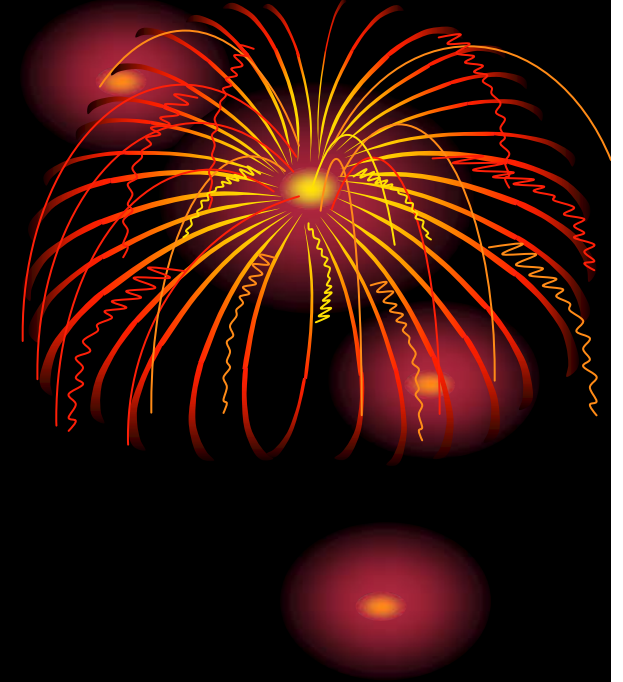
Applying pressure via...



- **Community leaders**
- **Government**
- **Landfill managers**
- **Influential outsiders**
- **Media**
- **X NGO champion**

Methodology

- **4 landfill sites**
 - **Nam Son (Ha Noi)**
 - **Trang Cat (Hai Phong)**
 - **Ha Khau (Ha Long)**
 - **Hung Dong (Vinh)**
- **Drop-off household survey (n=555)**
- **Follow-up with 10 active residents at each site**
- **Interviews with 29 key informants (environmental officials, commune leaders)**



History of Opposition



- **Ha Khau (Ha Long)**
 - **Opened 2003**
 - **Verbal complaints and protest letters**
- **Hung Dong (Vinh)**
 - **Opened 1985**
 - **Verbal complaints and protest letters**
 - **Trucks blocked in 1998, 2001**

History of Opposition



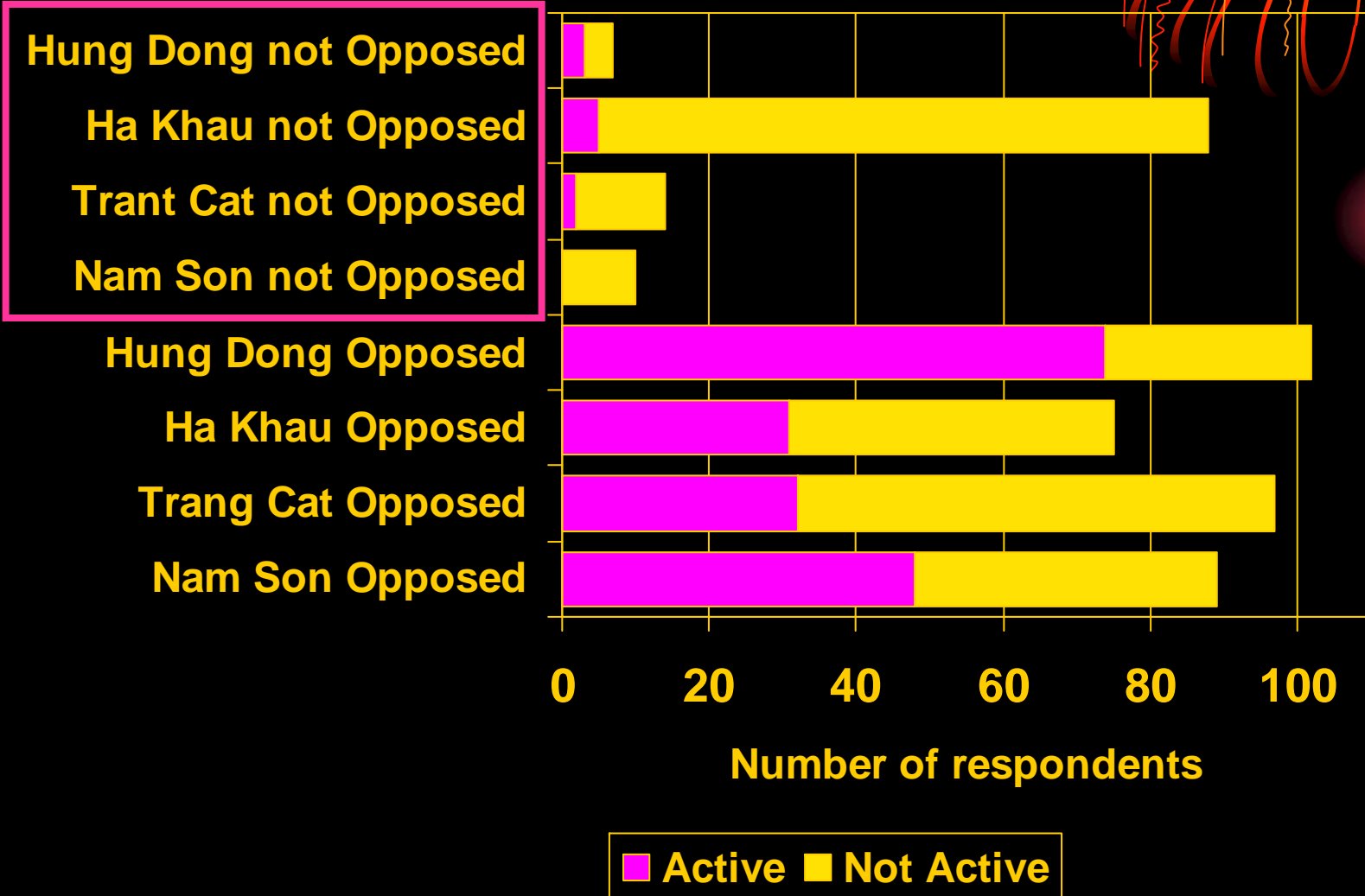
- **Nam Son (Hanoi)**
 - **Opened 1999**
 - **First sanitary landfill**
 - **Verbal complaints and protest letters**
 - **Trucks blocked in 1999, 2001**
- **Trang Cat (Hai Phong)**
 - **Opened 1997**
 - **Verbal complaints and protest letters**
 - **Trucks blocked in 2004 until time of survey (2005)**
 - **Police vans thrown into ditches**

Survey Results

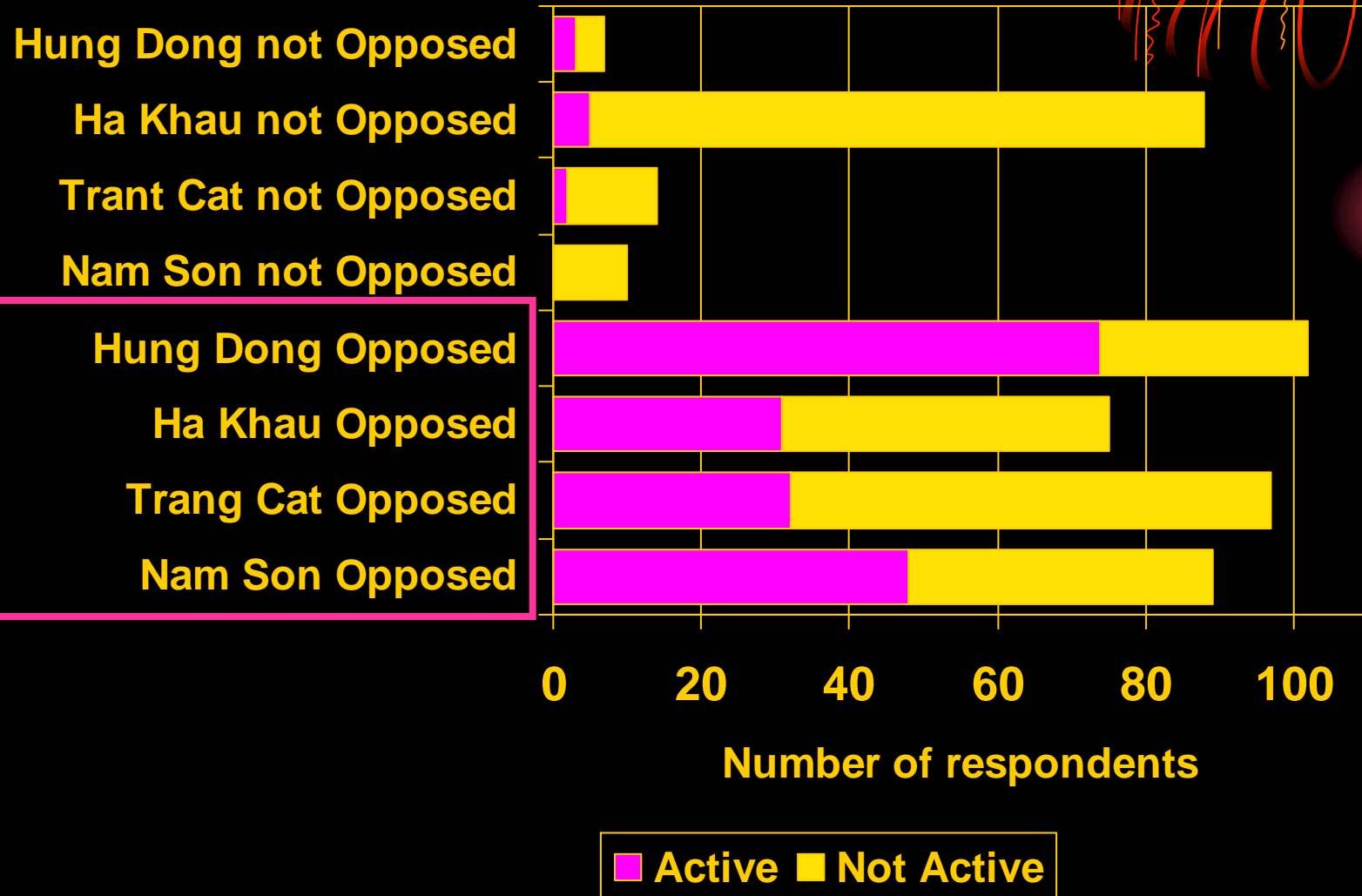


- **65% strongly or moderately opposed to landfill**
- **37% took action (vocal minority?)**

Active and Inactive Individuals by Attitude towards Landfill



Active and Inactive Individuals by Attitude towards Landfill

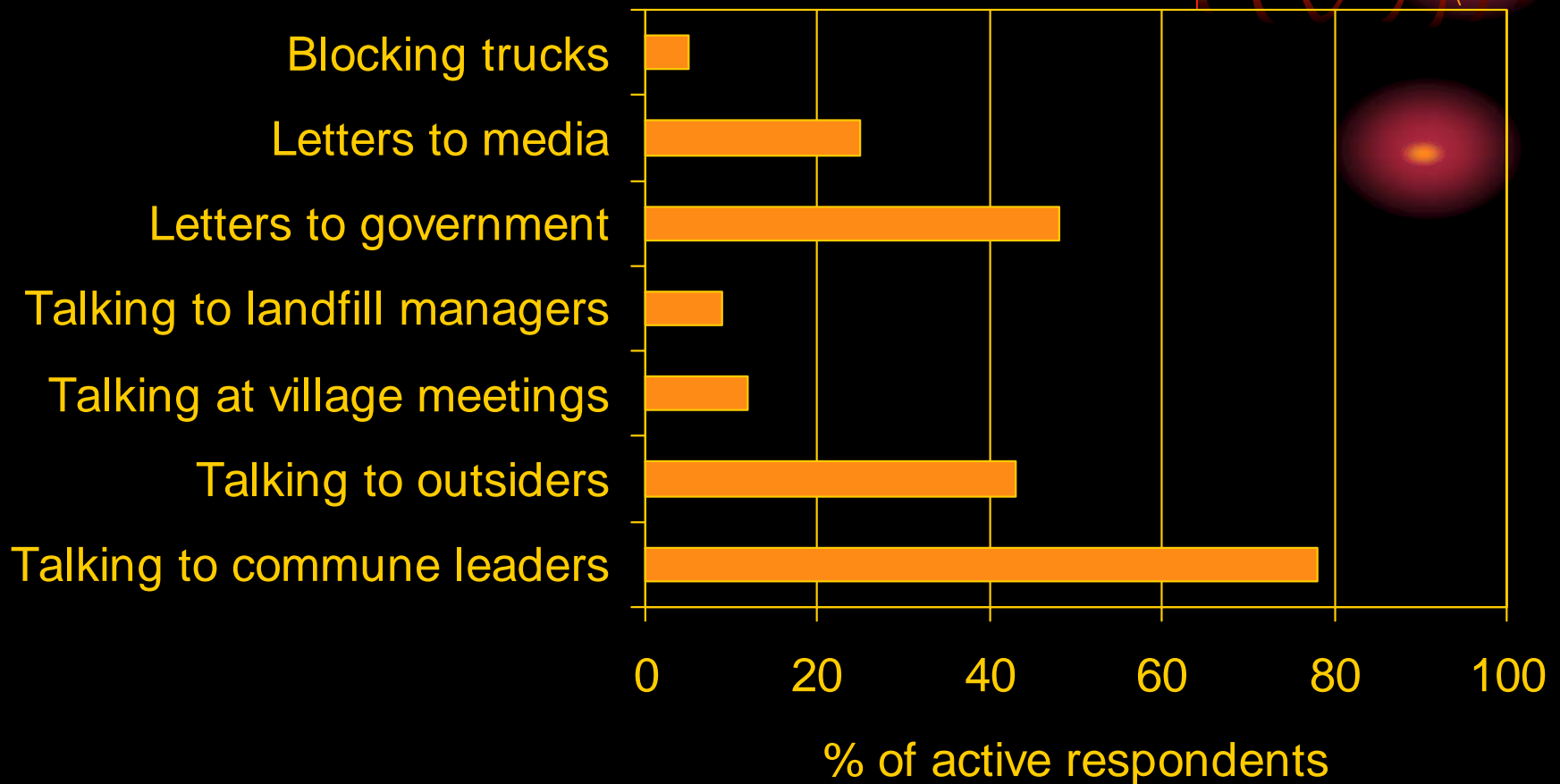
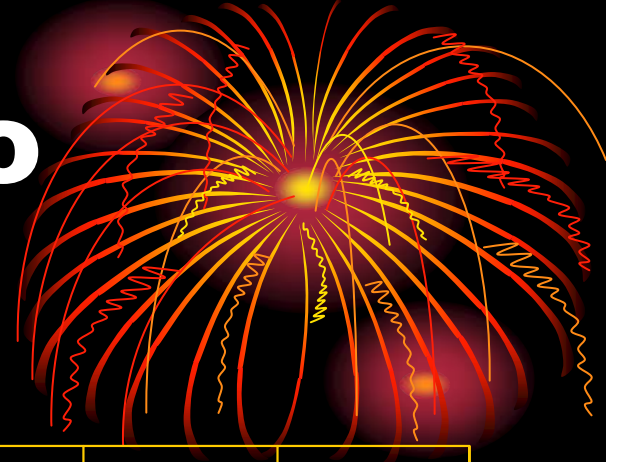


Escalating Opposition Measures

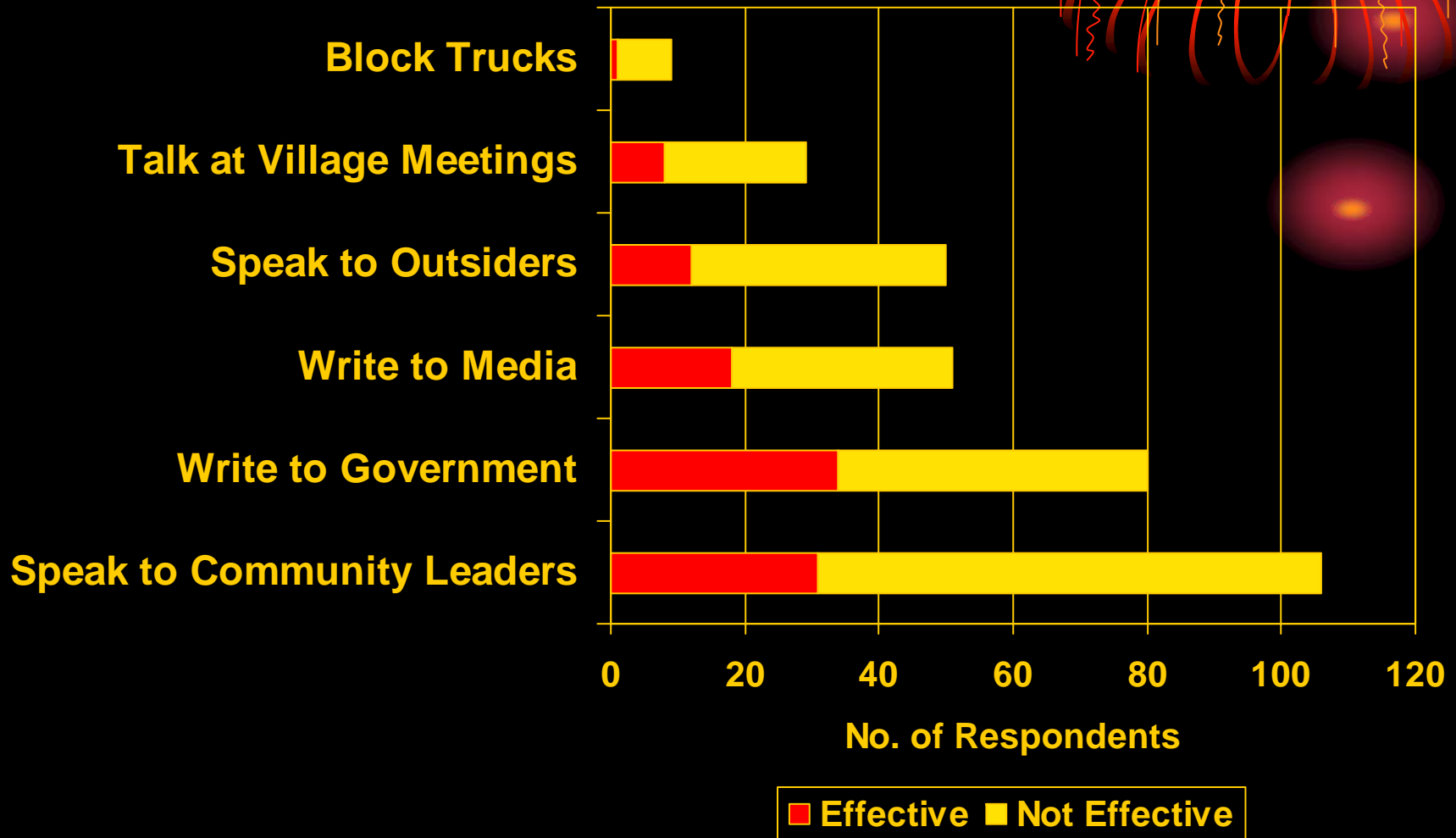


- **Talking 80%**
 - **Commune leaders**
 - **Outsiders**
 - **Landfill managers**
- **Writing 50%**
 - **Letters to government**
 - **Letters to media**
- **Civil disobedience 5%**
 - **Block truck access**
 - **Under-reporting**
 - **Women and elderly**
- **Violence**
 - **Attack police vans**

Measures taken to oppose landfill



Perceived Effectiveness of Opposition Measures





- **“We talk a lot in the village meetings, but nothing has been changed” (resident)**
- **Sending protest letters to the government was like “putting salt into the ocean” (commune official)**

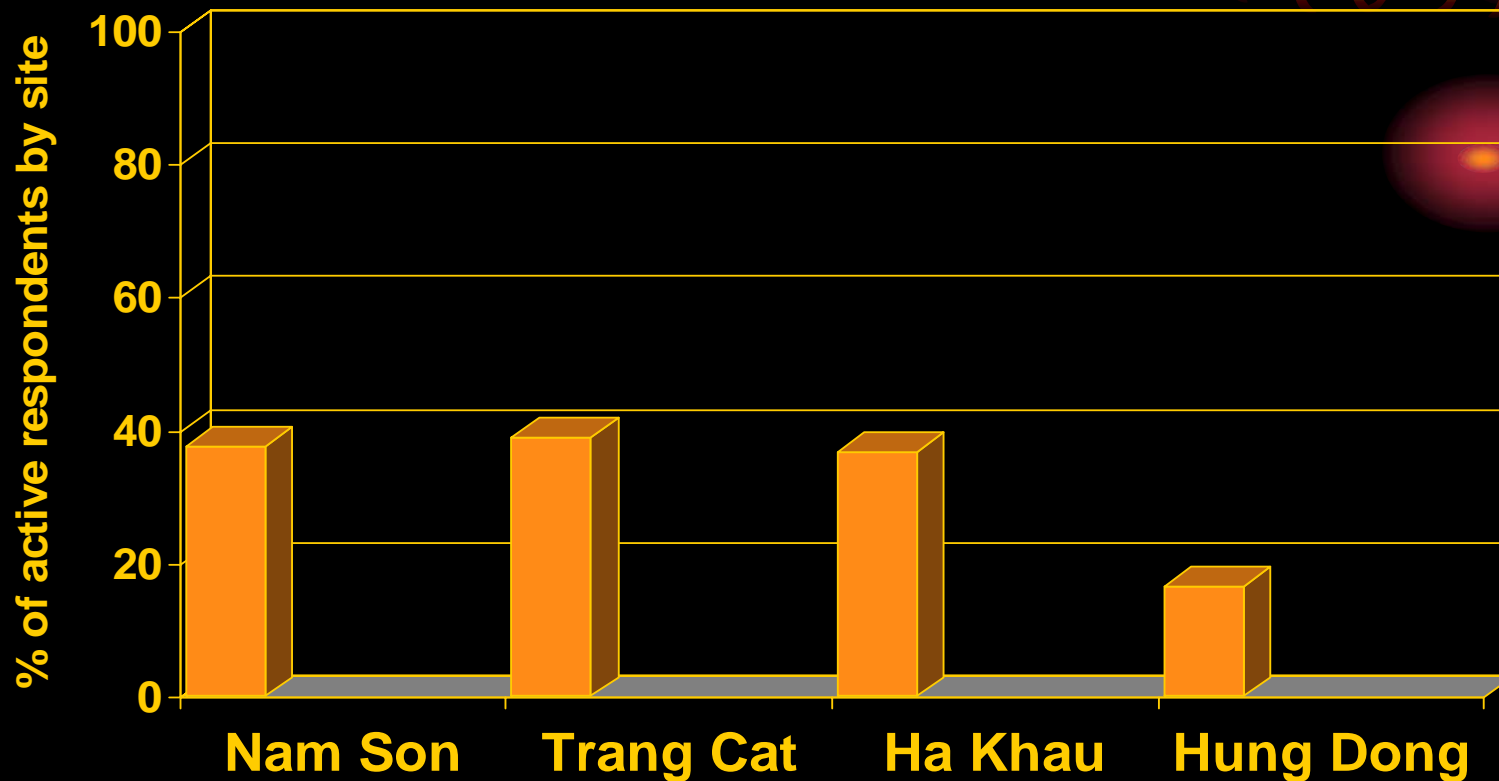
Results of Protests



- **Ha Khau**
 - **Reduced smoke**
- **Hung Dong**
 - **10-20% of requested compensation**
 - **Promised early closure**
- **Nam Son**
 - **Improved infrastructure**
 - **40% of requested compensation**
- **Trang Cat**
 - **Promised early closure**
 - **Promised compost factory**
 - **Promised community monitoring committee**

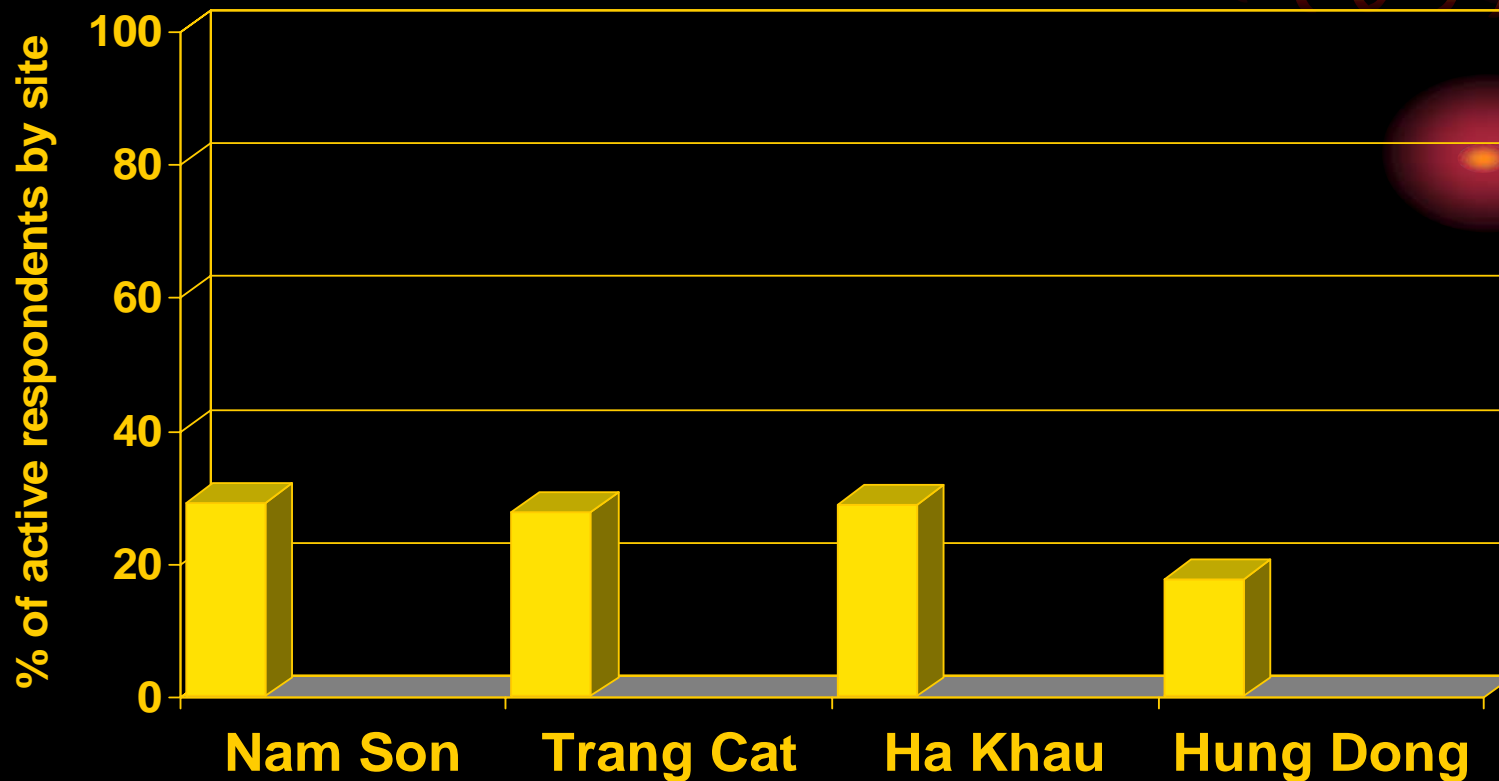
Better Daily Soil Coverage

$\chi^2 = 10.480, p = 0.015$



Noticeable Reduction in Pollution

$\chi^2 = 3.152, p = 0.369$



More Monetary Compensation

$\chi^2 = 9.335, p = 0.025$



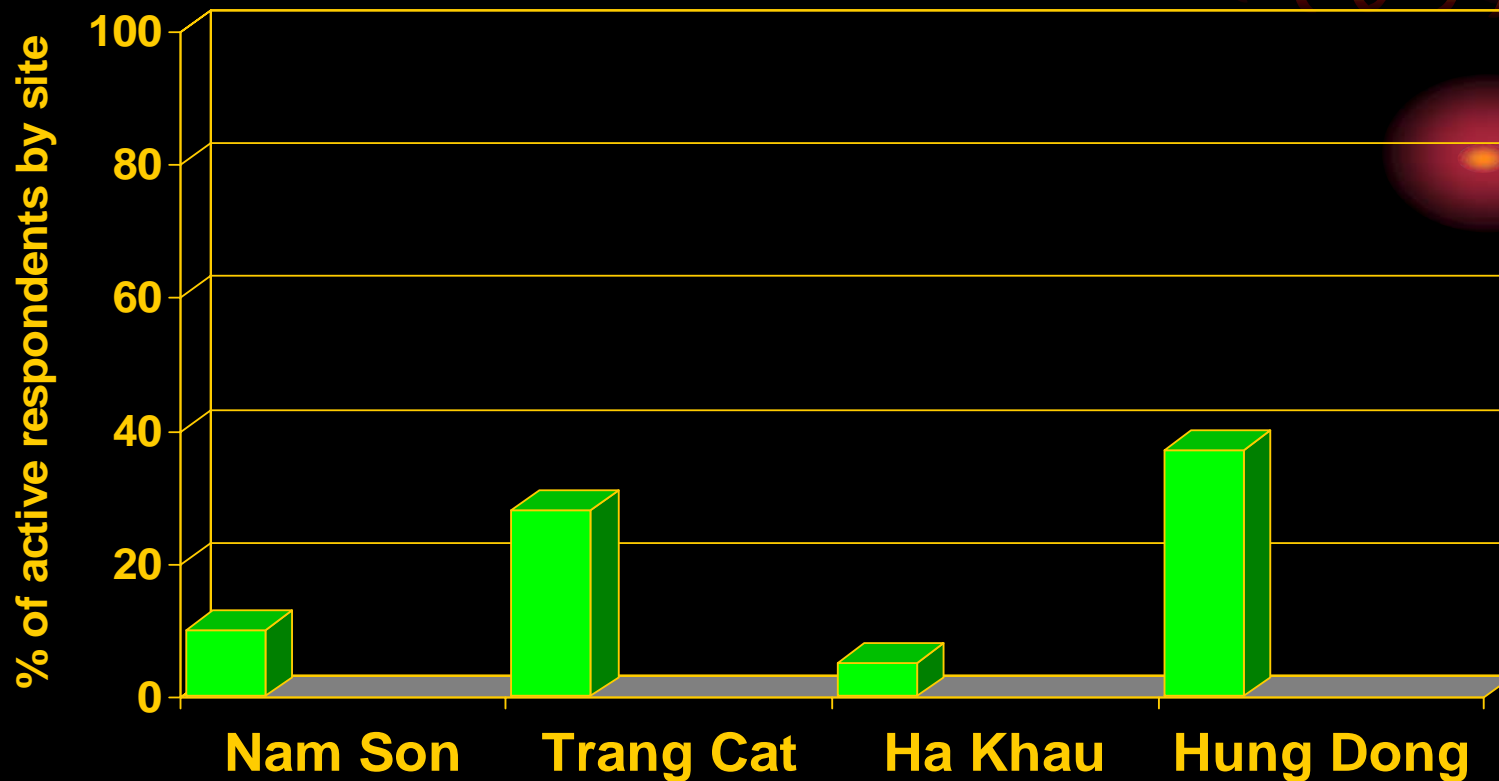
Better Infrastructure Provision

$\chi^2 = 9.354, p = 0.025$



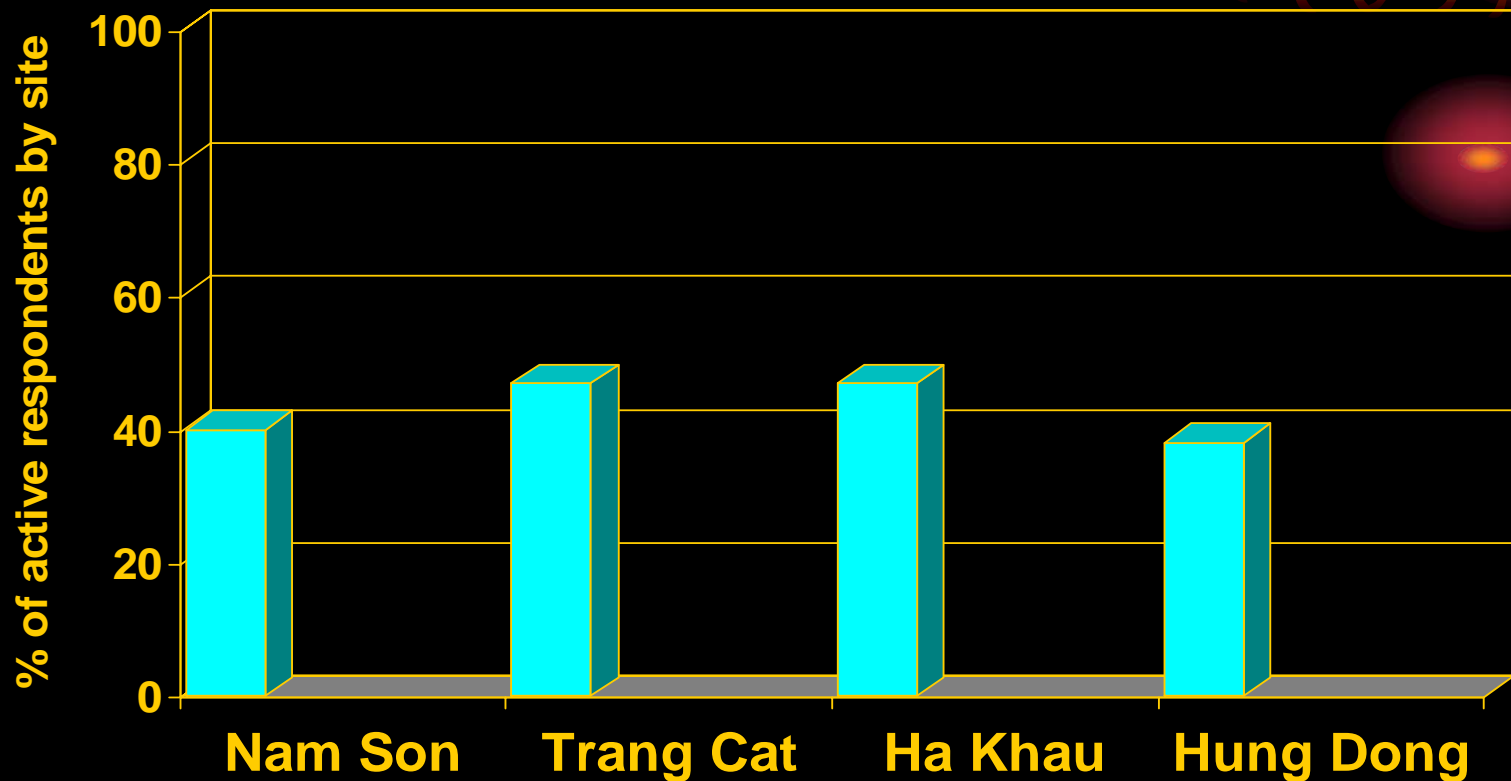
Promised closure

$\chi^2 = 19.957, p = 0.000$



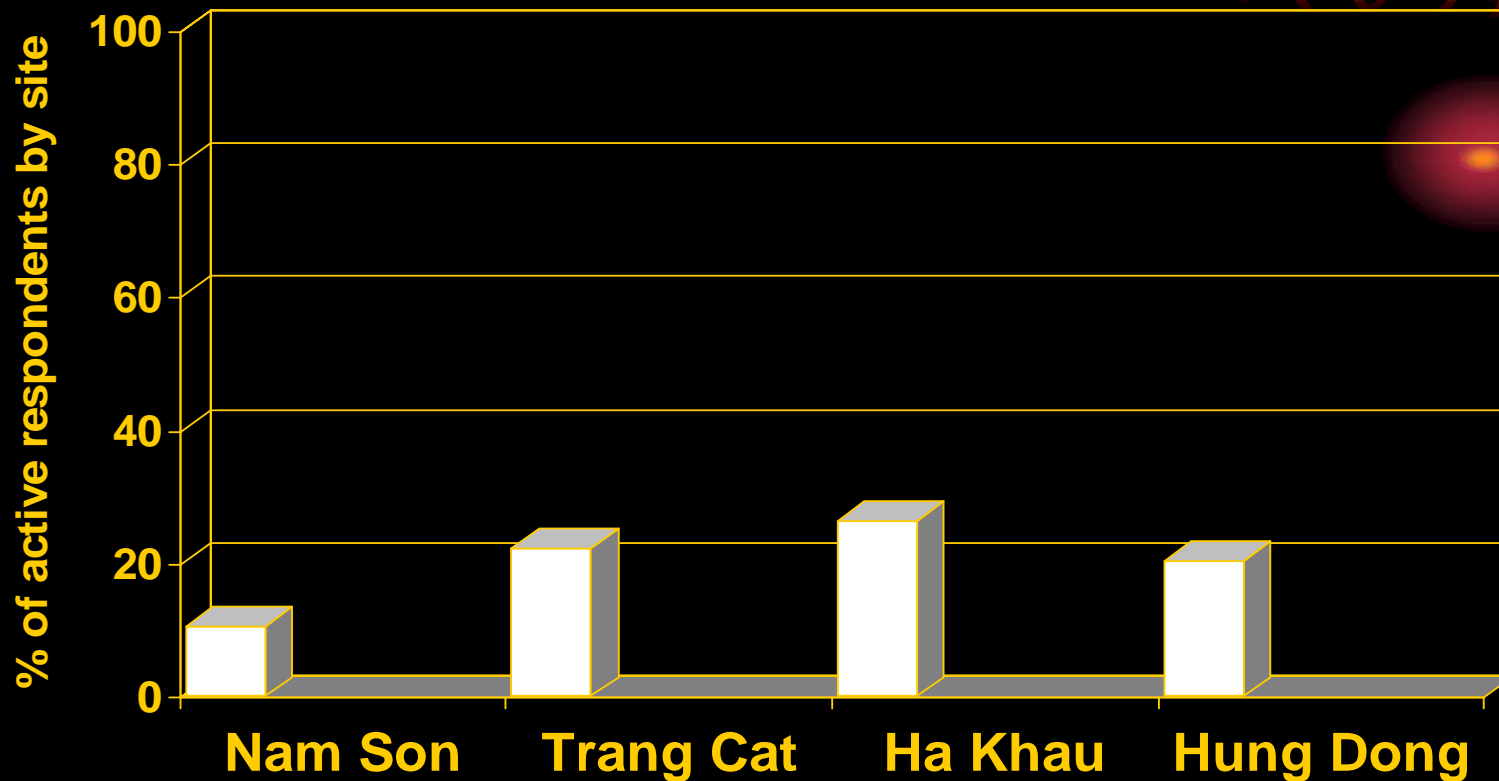
No Improvements

$\chi^2 = 1.492, p = 0.684$



Satisfaction with Outcome of Opposition

$\chi^2 = 3.859, p = 0.277$



Blocking Trucks at Trang Cat



- **“We think that we have not been successful yet. The success would come upon the government finding a new site for the city landfill and closing Trang Cat landfill”.**

Conclusions

- **CDR an escalating strategy**
- **Partially effective**
- **Media not as influential**
- **Outsiders not as important**
- **Perceived effectiveness of civil disobedience questionable**
- **Actual effectiveness stronger**



Conclusions

- **Policy implications**
 - **Need for public involvement in siting and operations**
 - **Stronger regulations and enforcement**
 - **Improved compensation**
 - **Beneficial uses**

