SUPPORTING URBAN POOR FACING CLIMATE CHANGE: CREATING EFFECTIVE ADAPTATION MESSAGES[1]

(MENDUKUNG MASYARAKAT MISKIN KOTA MENGHADAPI PERUBAHAN IKLIM: MENYUSUN PESAN ADAPTASI YANG EFEKTIF)

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Abstrak

Pemerintah, organisasi internasional, dan organisasi sipil masyarakat di Indonesia sudah mengkomunikasikan perubahan iklim kepada khalayak luas. Contoh komunikasi yang ada adalah aktivitas 'hijau' seperti bike to work, car-free days, dan bangunan yang berkonsep efisien energi. Namun demikian pertanyaan sederhana yang muncul: apakah tipe komunikasi seperti ini mampu memberi manfaat kepada kelompok yang paling rentan? Tulisan ini memberikan gambaran kebutuhan informasi dari masyarakat miskin kota ketika menghadapi perubahan iklim, terutama media apa yang dipercaya oleh masyarakat miskin perkotaan, pilihan sumber informasi dan bagaimana mereka ingin informasi tersebut disajikan. Sebagai contoh, t u l i s a n ini memberikan model pengemasan pesan adaptasi terhadap perempuan miskin perkotaan. Perempuan miskin perkotaan ternyata masuk dalam kategori struggling (41%), mengalami dampak perubahan iklim namun tidak memiliki sumberdaya dan dukungan untuk melakukan aksi adaptasi. Dengan memahami kebutuhan informasi dan model pengemasan informasi, akan mendukung efektifvitas pesan adaptasi perubahan iklim. Data dari riset ini dikumpulkan menggunakan wawancara mendalam, focus group discussion, dan survei terhadap 928 masyarakat miskin kota di Indonesia.

Kata Kunci: *Perubahan Iklim, Perkotaan, Adaptasi, Media, Komunikasi*

Abstract

Government, international agencies, civic society, and media organizations in Indonesia have communicated climate change to people. The examples are communication campaigns focusing on "green" activities, such as bike to work, car-free days, and energy-efficient buildings. One simple question arises in the practice: could these types of communication reach and provide benefits for the most vulnerable group? This paper offers an overview of urban poor audience needs of information, particularly on what media they use, who they talk to and trust, and how they would like Information delivered to them. As an exercise in crafting messages, women in urban poor will be put as the priority audience. This group falls into the struggling segment (41%). They are experiencing the most impact and cannot take much action. The struggling is willing to make changes, but lack of information and support prevents them from taking action. By understanding this sort of information, it will support delivering effective climate change adaptation messages. The methods included in this research are in-depth interviews, focus group discussion, and survey to 928 urban poor in Indonesia.

Keywords: Adaptation, Climate Change, Communications, Media

INTRODUCTION

The expected consequences of climate change are varied. Consequences that mostly recognized are extreme weather events, such as heat waves, drought, flooding, slow rise in sea level, melting glaciers, and polar icecaps require adaptation measures in many sectors of society (International Panel on Climate

[1] Paper has been presented in Seminar Ilmiah Kependudukan,- Kependudukan Untuk Pembangunan Pasca 2015 at 26 November 2014. This paper used data and framework of the Climate Asia report. Climate Asia's Indonesia report was compiled and written by Tan Copsey, Syarifah Dalimunthe, Leonie Hoijtink, and Naomi Stoll. For more information and data usage do visit Climate Asia data portal: www.bbc.co.uk/climateasia

Change, 2007). It is crucial to ensure that the adaptation measures themselves are sustainable so as not to be part of the problem they are supposed to solve. Since adaptation to global climate change aims at reducing vulnerability and strengthening resilience, a goal-oriented adaptation communication becomes urgent (Stern, 2007). Therefore, issue of climate change that is communicated to target audience is extremely important. On the other hand, information and communications about the causes and impact of climate change, as well as adaptation and mitigation action, have been generated largely from western science. This information must resonate with local ways in understanding the world if communities are to 'own' the adaptation process (Ford, Knight, & Pearce, 2013).

Communication approaches need to empower and encourage communities to draw upon their existing adaptive capabilities. This paper takes out some findings from Climate Asia's most interesting information on crafting messages to urban poor audience, which faces changes in climate, in order to make them taking action. Climate Asia is the world's largest study of people's everyday experience of climate change in seven Asian countries—Bangladesh, China, India, Indonesia, Nepal, Pakistan, and Vietnam. The project surveyed 33,500 people across the seven countries, including 4,985 households in Indonesia. The questions behind this study are: how do people in Indonesia live with climate change now? How will its impacts shape their future, and how will they, in turn, shape their environment? What are the most effective ways to support people to adapt to climate change, and how best the media, governments, organizations can and businesses communicate with urban poor in Indonesia?

Climate Change And Urban Poor Vulnerability

Urban poor are particularly vulnerable to climate change (Huq & Ayers, 2007). They are living on the edge physically, economically, and politically in coastal cities, on riverbanks, in hazard-prone areas, without rights to their land, with little savings, without identity, or a right to their cities. They represent the communities that will be hit hardest by climate change, placing them on the front lines of the scramble to adapt and mitigate its impacts. The debate over climate change indicates that extreme events will remain a serious threat to urban areas. In addition to the place where urban poor located, concentrations of people and economic assets further contribute to the high vulnerability of urban poor to disaster (Intergovernmental Panel on Climate Change (IPCC), 2001). The vulnerability of the poor springs from informal settlements, where they live in. Transience, or at least the anticipation of transience, is imbedded in the informal settlements. The vulnerability of slum dwellers to disaster risk is obvious. The slums usually develop in locations that are highly exposed to hazard risk. Urban poor resided in a slum is often unable to invest standard housing or to build-up financial reserves (Adger, 2003) (Bankoff, 2003).

In general people see climate change affects all people within a community, however women often have bear the impact in places where climate change being felt. This is the consequences of woman leading role in their families and communities. In the poorest part of urban, women had to work harder and longer. During the emergencies women also play as care providers and caregivers in their families. By recognizing the situation they are facing and tailored information they need we can achieve adap faster and enhance the impact of our actions.

Climate Change In The Media

Although global climate change awareness continues to rise, in most nations' news, coverage of climate change is miniscule compared with that of crime, politics, celebrities, the economy, or sports. Rating is the top priority of media maker and covering climate change adaptation and mitigation perceived contribute less to company benefits. The news media often frame climate change adaptation and mitigation as a dynamic and contested issue within intersecting realms of policy, science, and the public. Although science has confirmed that human activities are heavily implicated in climate change, the global phenomenon has been increasingly framed as catastrophic as though it must be considered dreaded and irreversible to warrant public attention. Social scares that accelerate political demands can spark broad social change (Shanahan, 2007).

In Indonesia national newspapers such as Kompas, The Jakarta Post, and The Jakarta Globe regularly publish articles on climate change. This media largely read by upper- middle class society with low number of reader of urban poor; particularly the women. The Government of Indonesia, through DNPI, BMKG, and its ministry, is also starting to provide climate change related communication more widely, with a particular focus on information about extreme weather events. During the focus group, members had trouble making sense of information about climate change. A number of experts and opinion-formers identified barriers to widen the understanding of the issue,

including the use of jargon, scientific language, and information that was not relevant to people's daily lives.

> *"Media in Indonesia is dominated by television. More than 90% of the population watches television. Most of the TV programme is based on trend issues which mostly related to political and economic issues. Environmental issues (such as forest fire, climate issue, and farmers' problems) are still considered as non-trend topics. It is not a sexy issue in the eyes of the 'rating'. A climate change issue sometimes appears in the news programme."* ***Media expert, Jakarta***

Understanding people's perceptions is crucial in order to craft communication that motivates people to take action to improve their lives. It is crucial to understand their perception of changes in climate, how these changes affect their lives and what they are doing to respond to them. Perceptions are shaped by a range of factors including exposure to media, communication with peers, personal beliefs and values, and education levels.

This research had used a mixed method approach, including qualitative and quantitative methods, to understand people's perceptions of changes in climate and the environment as well as the impacts of these changes in their lives. The findings would inform adequate communication to support people's needs in responding to these changes. Survey methods were used in this research. A total of 107 sub districts were chosen across Indonesia. Within each sub-district, up to 50 households were randomly selected following the right-hand rule of field movement and five households were skipped after every successful interview.

Qualitative research included in-depth interviews with experts and opinion formers, audience focus groups across cities in Indonesia. Added by community assessments activity in Jakarta and Surakarta. The in-depth interviews were conducted with key experts and opinion-formers from national and local government, the media, the private sector, civil society, science, and academia. Focus group participants were members of the public. At each location, focus group participants were selected according to age, gender, occupation, and social class to capture a diversity of views within the population. Initial insights from some of this research and the communication development process, which included workshops and an evaluation of existing initiatives, shaped the approach to quantitative research. Referring to Maxwell (2006) the analysis of qualitative research notes begins in the field, at the time of observation, interviewing, or both, as the researcher identifies problems and concepts that appear likely to help in understanding the situation. Researcher required to write frequent notes in according to identify important statement and propose way of coding data. Within this stage researcher was listing the concepts reflected in the notes and diagramming the relationships among concepts. Following the analysis, computer-assisted qualitative data analysis – Atlas.ti was employed.

This paper used 928 respondents that were observed as urban poor out of 4,985 Indonesia's general respondents, which were surveyed by Climate Asia. The 928 respondents categorized as urban poor based on their place of living (city) and their daily income (less than 2 USD). People followed a stratified random sampling approach. First, the country's population was separated by province. In each province, regencies were randomly chosen. Within each regencies, a number of sub-districts were chosen from urban and rural areas following the probability proportionate to size (PPS) method.

Table 1. Sample Distribution

Research area	Province	Number of respondent
Northern Sumatera	North Sumatera	86
	West Sumatera	68
	NAD	32
Southern Sumatera	Riau	49
	South Sumatera	29
	Lampung	31
Western Java	West Java	73
	DKI Jakarta	146
	Central Java*	64
	Banten	36
Eastern Java	East Java	32
	Central Java*	21
Eastern Island	Bali	41
	East Nusa Tenggara	29
	West Nusa Tenggara	26
Kalimantan	West Kalimantan	43
	East Kalimantan	38
Sulawesi	South Sulawesi	25
	South East Sulawesi	25
	West Sulawesi	34
Total respondent		928

A total of 107 sub districts were chosen across Indonesia. Within each sub-district, households were randomly selected following the right-hand rule of field movement and five households were skipped after every successful interview. Composition of research areas and number of respondent as follows:

THE STATE OF URBAN POOR

Patterns of development across Indonesia have created a transformational change. Many people experience the steady economic growth. The percentage of the population living in poverty has decreased from 18% in 2006 to 12% in 2012 (UN Data, 2013). A broad number of population described that infrastructure has improved and access to education is getting better. However, the big city such as Jakarta, Surabaya and Medan still remained as the main attraction to earn a living. This created slums and a growing number of urban poor. The urban poor were likely to say that life had not improved (58%), compared to the comfortable (42%) and well-off group (45%). The basics of life, particularly the availability of food (27%), health (21%), and money to buy essential items (13%) are self-concerned (Figure 1). They felt the food price was impossibly expensive and 79%had mentioned inflation was making their lives harder.

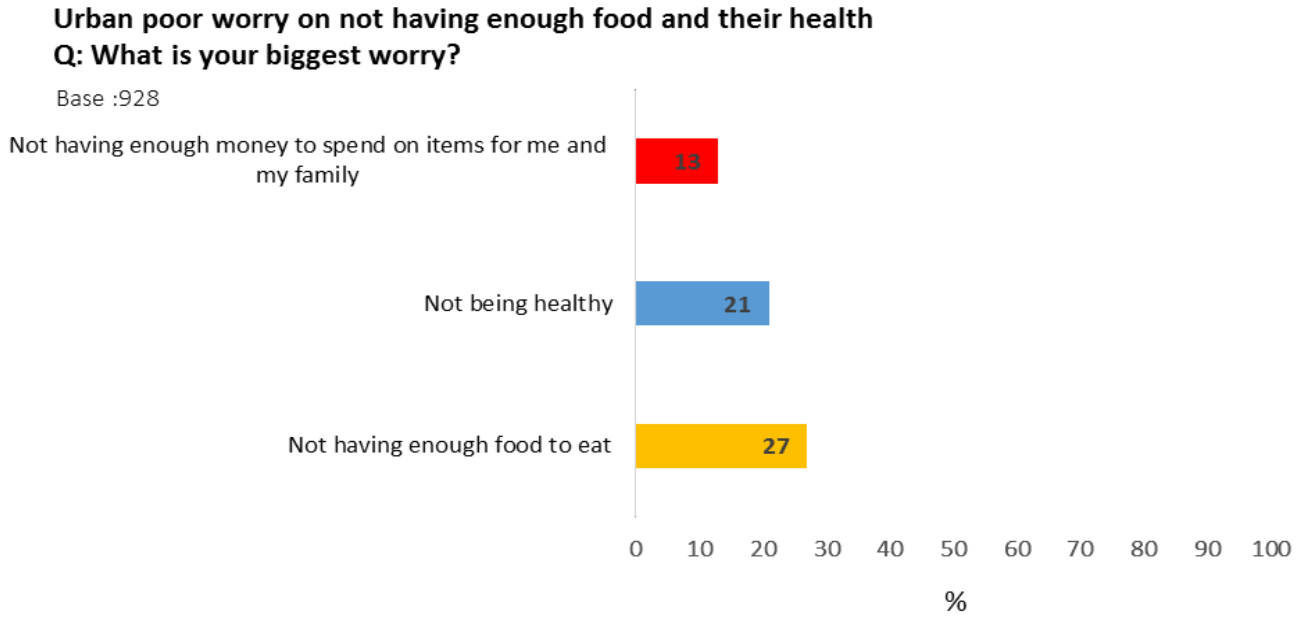

Figure 1. Urban poor biggest worry

Findings emphasized the importance of religion in people's lives (53%) and involvement in their community is one of their values (27%). Although living far from their hometown, urban poor was likely to join in communal activities, and religious leaders played an important role in communities. People were likely to have the current information and learn new things (12%). In the other hand, practicing traditional value was diminishing (4.2%).

CHANGES IN RESOURCES, ENVIRONMENT AND CLIMATE THAT URBAN POOR PERCEIVE

The Intergovernmental Panel on Climate Change suggested that the region has experienced an increase of 0.1–0.3°C per decade between 1951 and 2000 and has projected a temperature rise of 2.5°C by 2100 for South East Asia. A recent report by the World Bank noted that Indonesia is projected to see an increase in temperature extremes and that Jakarta is projected to become 5–15% drier by 2080 between June and August. Precipitation patterns have been observed to change over Indonesia. Broadly speaking there has been a decline in annual rainfall in the south and an increase in the north, although there have been local variations within this trend. Across the country, people had perceived changes in climate over the last 10 years. Perceptions of change were varied by region across this large and geographically diverse country (Figure 2).

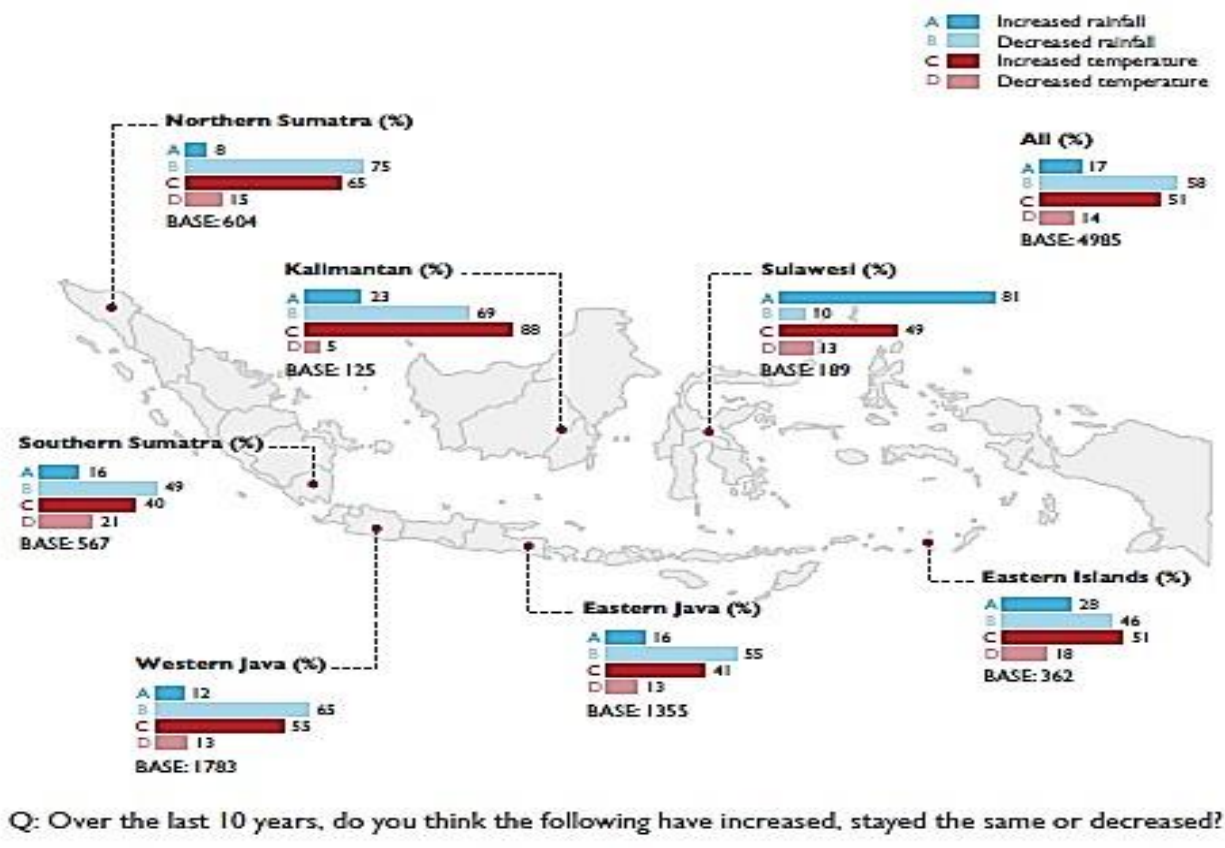

Figure 2. Perceptions of change in climate

To the urban poor, the emerging broad trends were increasing temperature (45%), declining annual rainfall (57%), unpredictable season for the last 10 years (55%), increasing extreme weather events (34%). The lack of predictability affected preparedness among the urban poor. For example a woman in urban Riau described how human activities, such as deforestation, were impacting her neighborhood. She noticed floods are more frequent and her house that is situated on the riverbank is frequently inundated by water from Kampar River. She never saw it when she was a child. What she knows now, the number of vegetation that prevents the flood is declining. Her counterpart from Jakarta saw the development that pushing the urban poor to occupy green space and create an increase in temperature as causes of climate change.

People living in the urban slum area felt that they had experienced a decline in water availability. Over a quarter of them mentioned water availability decreased a lot. Despite infrastructure growth in the city, many people's personal experience did not match the growth in larger scale. A community assessment head of the community said the price of water is too expensive and their local water source will not able to serve the community. Another insight from the ground, a man in Jakarta said he will take a bath and do his laundry at the same time to cope with the decreasing amount of water.

> "In the past people slept under a blanket, now they use fans and the people that can afford AC use AC. In the past people would wear hats, now they prefer wearing cloth so there's a little bit of a breeze."
>
> (Woman, Riau, Urban, age 35–44)

Large changes in the environment had been mentioned. The overall decreasing number of tree and vegetation in their neighborhood was a serious concern (70% of people said the number of vegetation had decreased), as the number of pest including insects that carried disease had increased (31%).

IMPACT AND RESPONSES

People felt changes in climate, for instance the increased temperatures and extreme weather, and the availability of key resources, for instance availability of water was having an impact on their lives. During the survey, people found it difficult to distinguish between impacts associated with the availability of key resources food, water, energy from those

associated with changes in climate. Over a fifth (23%) of urban poor felt that they were experiencing a high level of impact now from changes in climate and availability of key resource, such as water. This figure is likely to double in the future (Figure 3). They seemed concerned about the situation in 10–20 years from now. Their concern was likely linked to the exposure of communication about climate change, which they perceived as a threatening information and emphasizing the dangerous changes that may affect people's lives in the future. As a highlight, urban poor were unsure about how to deal with changing in climate impact to their health.

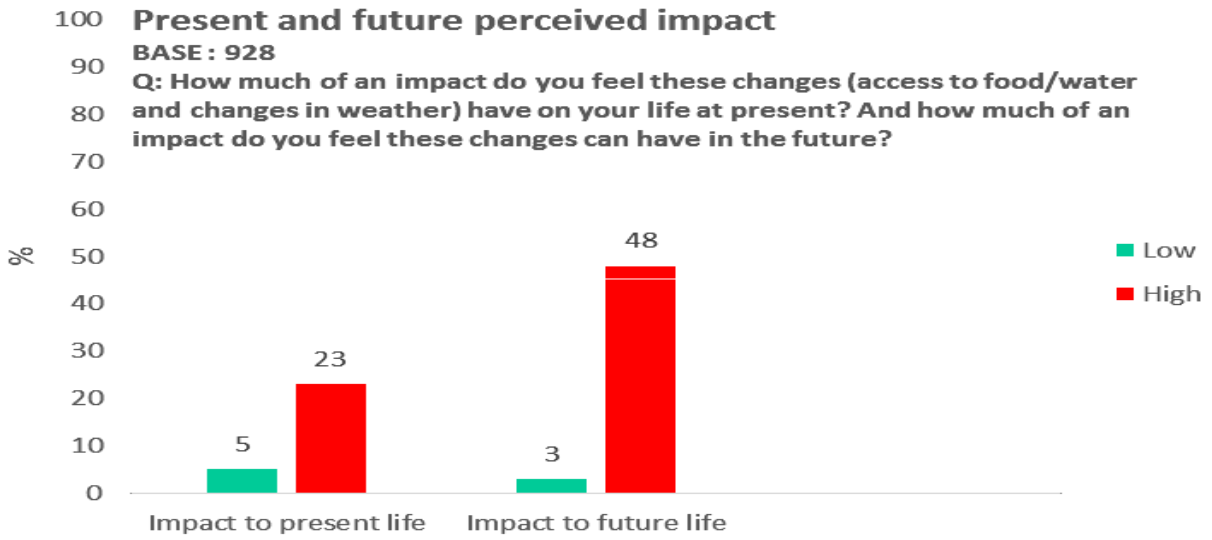

Figure 2. Present and future perceived impact

63% people felt that the changes they were experiencing were having an impact on their ability to earn money. Urban poor was less likely to have a steady job and they had to supplement their income through other work. Many people described making changes to their livelihood out of necessity. However, changes in climate were not the main reason for these changes. Instead, they provided additional stress, which coupled with pressures on less predictable weather and more extreme weather occurrence, which made people's lives harder. Some changes provided new opportunities. For example, in Jakarta, a longer rainy season meant an extended period of work for those who provided an "umbrella service" (*ojek payung*). Almost three quarters of people (74%) felt that the changes were affecting their current lifestyle. A campaign to adapting to changes in resources, such as electricity and water as the impact of climate change force them to take action, such as changing diet and using electricity more efficiently (Table 2).

Table 2. Urban poor current response to specific change in lifestyle

Current response to specific change in lifestyle	%
Changing diet	20
Using electricity more efficiently (e.g. Using energy saving light bulbs or turn)	18
Recycling water|re-using waste water	15
Storing saving water (e.g. collecting rainwater)	12
Using less alternative fuel for cooking (e.g. biogas)	8
Finding a new water supply (e.g. digging wells, installing hand pumps, tube well	6
BASE :928	

Feeling Under-Prepared Facing Extreme Weather Event

When noting the impacts of extreme weather, the financial cost of floods and storms were often mentioned. Damaged houses had to be repaired, and furniture that had been ruined had to be replaced. Sometimes, wages were also affected, as people were unable to get into work as a result of the flooding.

Almost half of the people felt at risk (48%), but only 31% felt prepared. Knowledge of how to respond to such events was very low, and relatively few people were taking the simple steps necessary to prepare for extreme weather (Figure 4). The impact of extreme weather was both mitigated and exacerbated by infrastructural development and improvement. However, the urban poor suffered the negative impact by the development. People in the Marunda slum in the city were particularly afraid because a large drainage channel had been built next to their homes. This channel, while having a positive impact for many other people in Jakarta, had spilled over during heavy rain and flooded the area.

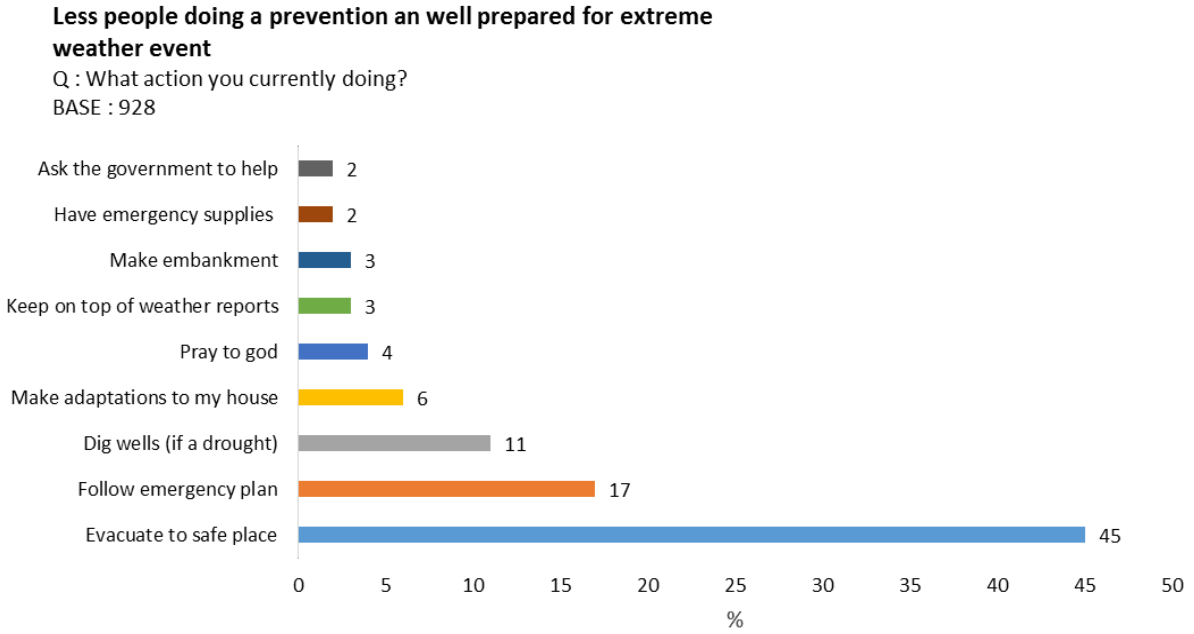

Figure 3. Less people doing a prevention and well prepared for extreme weather event

Enablers And Barriers To Action: Health And Children Future Are The Key

To enable crafting effective messages, it is important to identify key factors that enable or prevent action in response to changes in climate and availability of key resources. Understanding people's stated barriers and motivations and of factors that are associated with higher rates of response needed to be analyzed.
Health (83% strongly agreed) was not only a major concern; it was also a strong motivation for taking action. Actions that had tangible health benefits, for instance reducing the number of mosquitoes in the area by maintaining a cleaner neighborhood or cleaning the river, were popular. Peer pressure also motivated people to take action. People would feel guilty if they were not involving themselves in taking care of their environment (74% strongly agreed). A desire to provide a better future for their children (74% strongly agreed) would significantly motivate women for taking action.

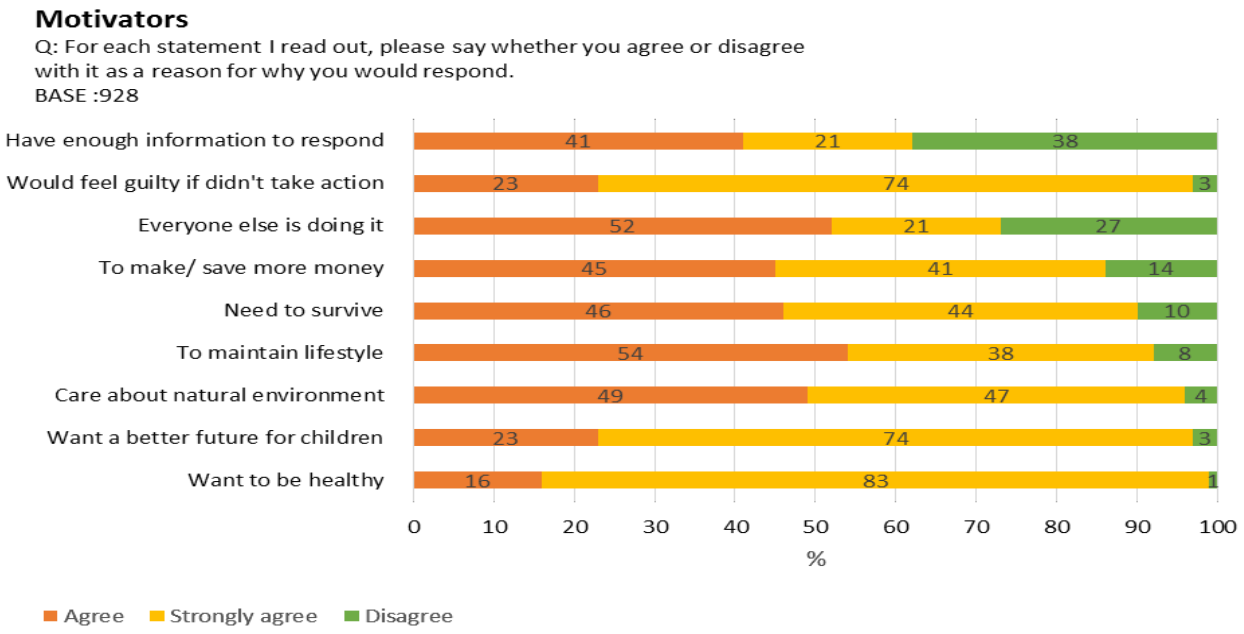

Figure 4. Motivation to take action

A lack of government support was seen to be the largest barrier to respond to changes in climate and availability of resources. Urban poor surveyed felt that the government regularly listened to their needs (49% agreed). However, people surveyed had higher confidence in their local neighborhood and agree working together as a community would solve their problem (82% agreed).

Not knowing how to respond, not having access to information, and not considering that these issues present a problem now were also barriers to action for a third of the population. Lacking the resources to respond was a barrier cited by a large majority of people. Some people saw taking action as expensive and unachievable. They felt they did not have enough resources to respond (46%). More importantly, the need of government support was highly mentioned by the urban poor as their barrier. People see their community likely needed a guidance from government to support them taking action.

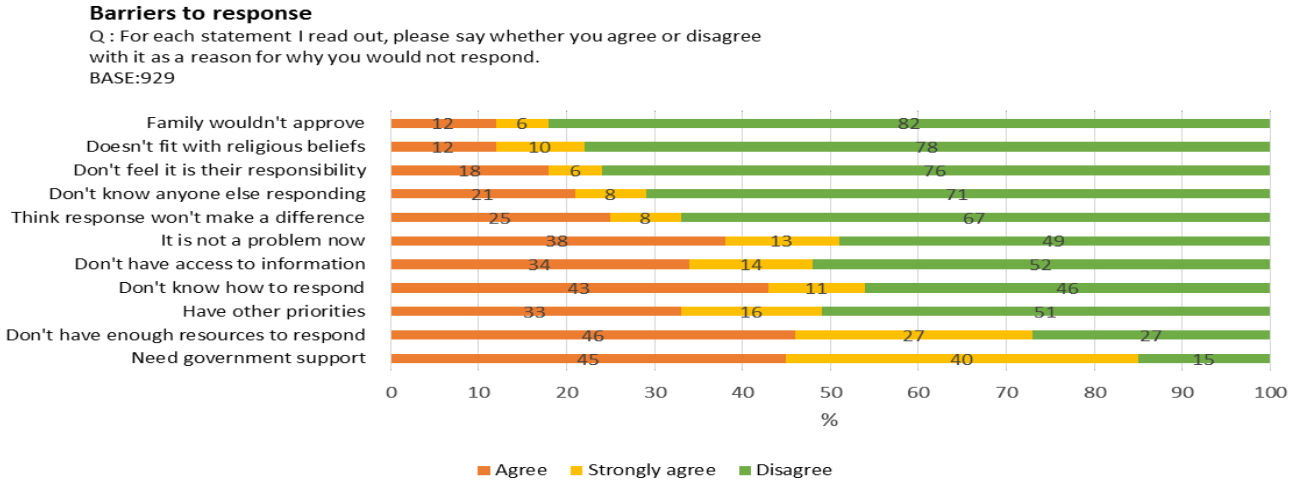

Figure 5. Barriers to response

COMMUNICATION TO ENABLE ACTION NOW AND IN THE FUTURE

Communication landscape

Almost 73% of urban poor reported lack of information about climate change impacts. The most vulnerable group was the most prone to the impact of climate change and having the least of the knowledge. This was the opposite where 57% people in the city (1m+) having the most information related to climate change. All the major information on climate changes currently were received through the TV programme (83%), followed by TV ads (10%), community meetings (10%) and through the radio programme (2%). They also likely received information from the religious institutions (48%). FGD participants mentioned that they first heard about the climate change through the TV news programme. And after that, more often they heard the information from the extension volunteers through *sosialisasi* program. Respondents described that climate change Information from TV news was about whether the rotation of rainy and dry season was getting harder to predict and also helping in increasing new diseases and pests.

Through the programme, they played over and over again Ebiet G. Ade's *Rumput Yang Bergoyang*: Nature gets angry at human behavior causing landslides and tsunami. However, there were some PSA from TVRI despite low share viewers. Other ministries embedded their climate change cause in programmes related to travel and tourism places or challenging locations, such as *Jejak Petualang*, or variety show, such as *Bumi Manusia* (The Human Earth) at TVOne.

> *"Information overload has created anxiousness, confusion, and concern among the grassroots community, as they are only concerned about their access to natural resources, especially in their areas." Media expert, Jakarta*

Television is a dominant mass media in Indonesia. While radio listener is decreasing, people switch their preferences to new media, such as mobile phone and internet. Respondents preferred to receive information about climate change through TV and respected community members.

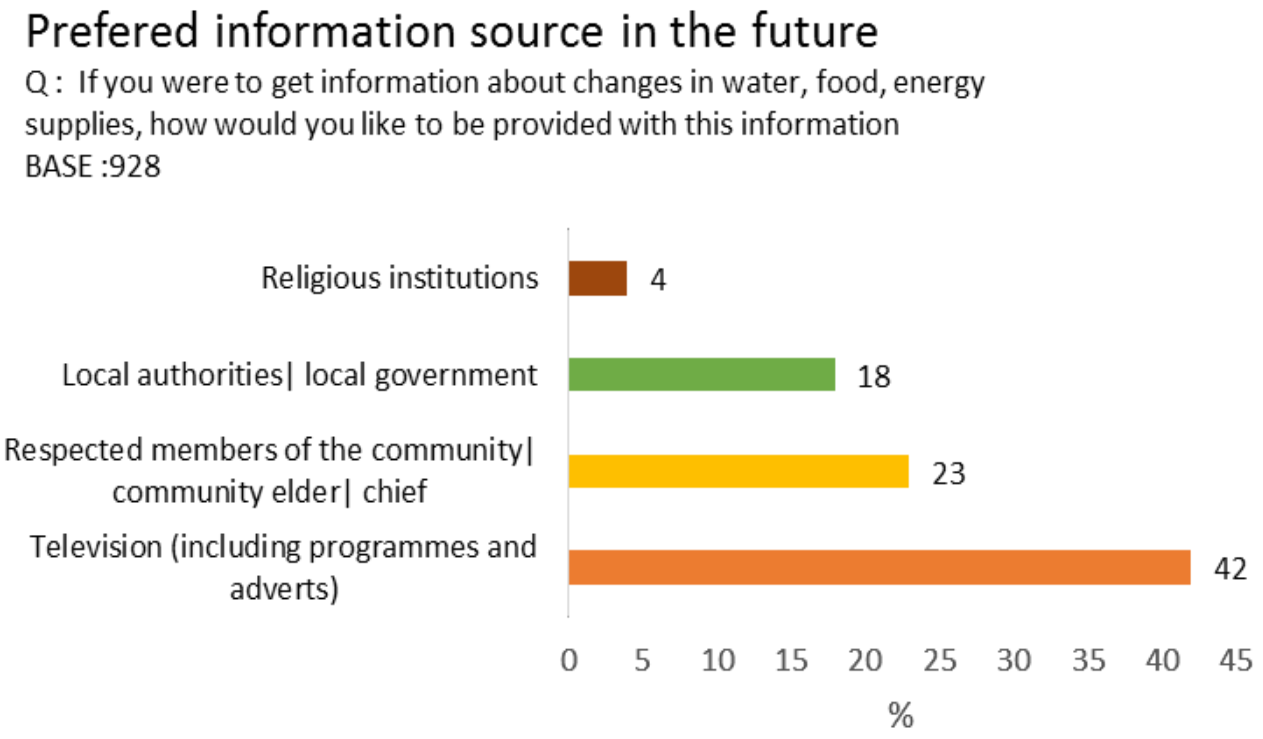

Figure 6. Urban poor preferred information sources

People's information need varied from information about the cause of climate change (72%), the future impact to their life (69%), and stressed the importance of increasing their capability to adapt (65%). People were less likely to learn from other experience (73%), but needed more information to educate children (61%). Information delivered through news (82%) and reality shows (68%) were the most preferred format. Although mass media were the main preference, face-to-face communication was still desirable in some cases since people could assure the information was correct as it came from their respected member of community or expert.

What media can do

Communication can help individuals by building awareness, motivation, self-belief, knowledge, and skills to enable them to take action to secure food, water and shelter, improve economic opportunities and security, reduce the risk of disasters, and cope with crises. It can also support communities to discuss common issues and work together. At the national level, mass media, particularly television, can enable and support individual people to respond to changes in climate. To do so, selected messages from Climate Asia's Indonesia report has brought up bridges to communicate to urban.

- Engage people with the issue by framing communication around people's values and motivations for action. There is an opportunity to increase engagement with climate change andencourage action now by framing communication around the things people value. For instance, strong desires to protect health and the environment, as well as provide sustainability for future generations.

- Empower people to make choices for themselves. Empowering the urban poor will reduce their reliant on government to take action.

- Build knowledge and inspire innovation. Urban poor's keenness for information about what they can do to respond to climate change. Government and civil society are already helping to educate people and build knowledge.

Using segmentation towards effective action

In order to understand people's needs and identify opportunities to communicate with them effectively, segmentation was made. Using cluster analysis, each segment varied with the factors that enable and prevent a response. As such, each had different communication needs and could be supported in different ways. These segments were surviving, struggling, adapting, willing, and unaffected.

Urban poor in Indonesia fell into struggling (41%) segment. It was completely different compared to the majority of the population. Indonesian were willing (55%), and the willing are more affluent. They were aware and felt that they understood climate change. More than any other segment, they were expecting high levels of impact in the future. The struggling was a group experiencing the impact of changes in climate but facing barriers to take action. Struggling group is the group that trying to take action, but finding it very difficult. There are 96% said their communities worked together to solve issues. Around 89% felt they lacked access to information and 89% would take action if it made or saved them money.

The struggling were enduring the most impact of any segment, but could not take much action. However, unlike the surviving, the struggling was willing to make changes. Lack of information and support prevented them from taking action. Despite strong community ties, they did not discuss issues that have something to do with food, water, energy, and climate with their peers very much.

When supporting the struggling group, the aims for communication need to tailor as follow:

- Promote discussion to help people make complex decisions. The struggling value fitting in with people around them and their communities. Encouraging discussio of potential options for response is likely to lead to communities making decisions about how to make the most of limited resources.

- Take collective action. Communication could be built upon the high level of community cooperation by encouraging collective action.

- Highlight the financial benefits of adapting to changes. The struggling are more likely to act if there is a chance that the action will make or save them money.

- Build networks. People feel connected to the community. This ethos can be harnessed by facilitating dialogue between communities so that ideas and issues can be shared and discussed.

Table 3. Distribution of urban poor women across five segments

	Surviving	Struggling	Adapting	Willing	Unaffected
All (BASE: 928)	15%	41%	19%	14%	11%
Urban poor women (BASE :450)	22%	34%	26%	14%	4%

EXPENDING SEGMENTATION: WOMEN IN URBAN POOR AS PRIORITY AUDIENCE

The segments above would be used in exercise to help prioritize group of people that could be targeted through media and face-to-face communication. In this paper, women from the urban poor community would be the priority audience.

Who are they?

Women in urban poor were a housewife, petty trader/shopkeeper, and junior office worker. They lived with more than 4 family members in the household. Their biggest worry was their children's future.

Why choose them?

Women in urban poor were identified by all focus group participants as a vulnerable group. Experts and opinion-formers stressed the vulnerability of this group as they were likely less involved in taking decision in their residential area. Only small number of them was taking action despite life in the edge of climate change. Over half of them (52%) did not have access to information. When it comes to adapting, women found themselves self-cynical (55%). They felt there would be no chance for them to improving their way of conforming to changes in climate.

Information sources

TV was the most used media by women in urban poor, 94% watched TV daily. Unlike the general urban poor, TV was also seen as the trusted source of information (94%). Number of women trusted other source of information regarding changes in environment was very low. A high number them distrusted the government (81%) and even religious institution (92%). Women in urban poor were less likely to discuss the impact of changes in climate to their key resource. The frequency of discussion was very low, less than quarter of women in urban poor (23%) discussed it with their family or friends.

At the local level:

Relating climate change adaptation into money- making activity would motivate women to take action. A women group monthly gathering facilitate by opinion former or expert would enable woman in urban poor community talked to their peers and sharing their issue at the same time.

CONCLUSION

Communication with this audience should seek to trigger discussion among them and the community member. Assist women in urban poor to prepare extreme weather events, reduce their cynicism, and build on their self-efficacy. A variety TV show and talk show that provided room for open discussion on future impact, alternative livelihood, and educates their children would resonate strongly. The program urged the sense of belonging to this urgent issue. Not only bringing serious discussion, an entertaining program was required.

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