

# Survey of Experts on Climate Change Awareness and Public Participation in China

Berthold KUHN and ZHANG Yangyong

**Abstract:** Climate protection issues are receiving more attention in China. Responding to this survey, 133 environmental and climate protection experts indicated that the government is a key factor in raising awareness of climate protection in China. Experts participating in the survey also referred to the role of the media – in particular social media – NGOs and educational institutions in spreading climate protection awareness. Additionally, interviews were carried out with 40 of the experts, who were grouped into different categories to discover whether there were any striking differences of opinion between experts of different backgrounds. Their assessments revealed few statistically relevant differences, though some are worth noting: Chinese researchers, project managers and representatives of NGOs were more positive than international experts regarding the impact of the Rio+20 conference on climate change discourse in China. Also, the youngest experts with the least international experience evaluated the potential of green volunteer work highest.

■ Manuscript received 18 April 2013; accepted 14 November 2013

**Keywords:** China, climate change awareness, participation, government, non-governmental organisations (NGO), media

**Dr. Berthold Kuhn** is an adjunct professor (Privatdozent) at the Otto Suhr Institute of Political Science, Freie Universität Berlin and an international cooperation consultant. He was previously a professor at the School of Public Affairs, Xiamen University.

E-mail: <berthold.kuhn@t-online.de>

**Zhang Yangyong** is the director of the Social Work Practicum and a Social Work teacher at the School of Public Affairs at Xiamen University. He has conducted many training courses for grassroots NGOs and is well networked within the Chinese NGO community.

E-mail: <charleszhang@xmu.edu.cn>

## Growing Evidence of Climate Change Awareness in China?

Climate change is a complex and abstract issue that is influenced by a variety of factors (United States National Research Council 2010). It has become an issue of major global concern and the subject of growing international and regional cooperation. Many agreements at different geographic levels have been concluded (Balsiger, Prys, and Steinhoff 2012). Recently held global summits and conferences, including the United Nations' Rio+20 in June 2012 and the Copenhagen conference in 2009, have demonstrated how many obstacles remain in the way to achieving progress in climate protection. The process will require enormous effort by many countries and stakeholders at all levels of society.

China's enormous and rapid economic growth has made the country the world's largest emitter of carbon dioxide, accounting for more than one-fourth of global emissions. China's carbon emissions grew 9.9 per cent in 2011 after rising 10.4 per cent in 2010 (Fogarty 2012). The success of global efforts to mitigate climate change and to design appropriate adaptation strategies will largely depend on contributions made by China. The issue of climate protection is not only complex but also politically sensitive in China. It cuts across bureaucratic turf (Conrad 2010) and involves foreign policy issues and concerns of international trade, thus placing China's climate protection efforts under global scrutiny.

Research work on climate protection issues in China has mainly focused on China's role at the international level (Tangen, Hegelund, and Buen 2002; Zhang 2013), China's involvement in the Kyoto Protocol (Oberheitmann and Sternfeld 2009), and its policymaking and climate governance at the national level (Chen 2009; Conrad 2010; Wübbecke 2010; Yu 2004). Consequently, it relates only indirectly to the focus of this paper.<sup>1</sup>

---

1 The study is one of the outputs of a project funded by Friedrich Ebert Foundation, Shanghai office. The study was supported by two assistants: Ms. Chen Keru and Ms. Jia Xibei. Prof. (Mr.) Zhijia Zhou, School of Public Affairs, Xiamen University and Ms. Kerstin Franzl, Nexus Institute, Berlin have provided valuable advisory services. The stay of Prof. Kuhn at Xiamen University was supported by the GIZ-CIM programme and the state of Rhineland-Palatinate.

Wübbecke's (2010) analysis of the role of experts in Chinese climate change politics concludes that experts at semi-official research institutions exert significant influence on policymaking and that their relationships with government officials are among their most important resources (Wübbecke 2010: 44). His study examines the role of experts working only for Chinese academic institutions and does not include NGO experts or international experts working in China. The present paper offers a different approach, however, in that it focuses on the attitudes and assessments of experts of different backgrounds rather than on their role in the policymaking process. It seeks to understand in which areas opinions of experts of different backgrounds converge or diverge and how these experts assess the level of awareness, the role of NGOs and the level of citizen participation in China.

The number of organisations, projects and initiatives dealing with climate protection in China is growing. Climate protection is being addressed not only by government departments and research institutions but also by many environmental NGOs (Xu and Ye 2011) – though their role may still be limited compared to the role of NGOs in Europe and North America. Zhang (2010) has highlighted some of the perceived deficiencies of Chinese NGOs: a lack of global ideas and vision, shortage of funds, only few professional staff, limited experience and insufficient governmental support.

There is some evidence that the trend in China, albeit recent, is to assign more importance to climate protection as a political and socio-economic issue. For example, the Chinese government has developed policies and set targets to address climate change. Terms such as “green economy” – one of the central themes of the Rio+20 conference – as well as “green growth” and “green GDP” have become focal points in political and social discourses in China. In addition, the Chinese media has more prominently begun to report environmental and climate protection issues. *China Daily* started a series of articles on green development in March 2013. On the conference level too, the issue of climate protection is being addressed from different angles, including from social and political science perspectives (Kuhn 2013).

The results of a study conducted by Fu Rong (2009) show that compared with developed countries, public awareness of and participation in low-carbon initiatives in China remains minimal. Fu high-

lights the need for China to introduce a low-carbon footprint culture of awareness among its citizens, to support the development of environmental NGOs and to innovate participatory approaches. A *Global Times* survey from 2010 suggests that environmental and climate protection issues are still a rather low priority for Chinese citizens (*Global Times* 10.08.2010 quoted by Heberer 2012: 7). These findings appear to be supported by an Asia-wide opinion poll on climate change and its implications for climate change policies (Kim 2009). A more recent study conducted by Hong (2012) finds a growing level of awareness of environmental issues in general and of climate protection issues in particular. Although climate protection is developing into a distinct policy area, we can observe, however, that the issue of climate protection continues to be joined together with broader concerns about pollution and environmental matters.

This research endeavours to determine how experts assess the level of climate change awareness, the role of NGOs and the level of citizen participation in China. We were interested in finding out whether experts still consider the level of climate change awareness and citizen participation to be low? Does the professional background, age or gender of the subject experts contribute to striking differences of opinion? The overarching hypothesis of this research was that experts would consider the level of climate change awareness and the willingness of citizens to contribute to be rather low. It was presumed that there would be no significant differences discovered between the various groups of experts that participated in the study. It was difficult to predict the level of assessment and where any differences might occur.

## Methodology of the Survey

The aim of this project was to provide a China-wide analysis of climate change awareness and public participation. Consequently, the most suitable methodology – given the available resources and the size and diversity of its population – was to conduct a survey of experts in China. Asking experts about public opinion on certain issues is often a good and practical way to get an approximation to the attitudes and opinions of the general public. Population surveys in China have historically faced serious political-administrative and organisational limitations, particularly with regard to sensitive issues. Inter-

views and focus group discussions were used to complement this analysis because the sample size (133 experts) of the questionnaire-based survey was relatively small. The presentation of the study results are structured along the lines of the three topics of climate change awareness, the role of NGOs and citizen participation. In the case of participation, on which we asked more questions than on awareness or the role of NGOs, the results of the rating scale questionnaire and the answers to the interview questions are discussed in two separate subsections.

## Selection of Experts

Network and snowball sampling were used to select the experts for the study. The project team contacted over 250 experts and was able to collect 133 questionnaires and 40 interviews. The focus groups in Beijing and Chengdu comprised more than 35 participants, including those experts who participated in the survey as well as new experts.

Based on self-assessment, the selected experts were divided into the following groups representing their professional orientations:

- Chinese researchers with a social, political or environmental science background who were actively involved in the field of environmental and climate change issues
- Leaders and staff of Chinese environmental NGOs
- Chinese project managers working for government agencies or for government supported projects
- International experts working on environmental and climate change issues in China or travelling frequently to China – many of whom work for German development cooperation institutions and combine research with project management work.

It proved to be most difficult to get responses from personnel working in a hierarchical set-up in government institutions because they are not supposed to voice their opinions without the consent of their superiors. This type of constraint is not particular to China; it arises in survey experiences in other countries as well (Kuhn 2011). We therefore contacted Chinese staff who worked more indirectly for government entities. Representatives of the business community were not considered for this survey because their level of expertise in social science-related climate change issues was not considered relevant enough to create a separate group.

The primary aim of the research was to ascertain differences in assessment between experts from different professional backgrounds. A secondary goal of the study was to get a general idea of the experts' assessment of overall climate change awareness as well as the role of NGOs and citizen participation. However, variables such as gender, age and international experience were also considered to be relevant and were subjected to data analysis. Table 1 shows the gender distribution of experts for each category and was produced in response to the assumption by some participating German scholars that the Chinese expert community is strongly male dominated. This depends on the category but is certainly not true for the NGO community. In fact, there were fewer women in the community of international experts.

**Table 1: Gender Distribution of Participating Experts**

Category	Female (in %)
Chinese Researcher (R)	23.07
NGO Leader/Staff (N)	50.98
International Expert (IE)	21.05
Project Manager of Government Agency/Government-funded Project (PM)	45.45

Source: Authors' own compilation.

The proportion of females represented in the study correlates approximately with the percentage of female experts in the respective category in the whole of China as estimated by the research team. NGOs have the highest number of female experts while the percentage of international female experts is rather low.

### Sources of Information: Questionnaire, Interviews, Focus Groups

The research team opted for a threefold methodology: a rating scale questionnaire, interviews and focus group discussions conducted in Beijing and Chengdu. The responses to the questionnaire and most of the interviews were collected between May 2012 and August 2012. Many questionnaires, especially those submitted by NGO experts,

were collected on the occasion of the first nationwide China Charity Fair held in Shenzhen in July 2012. The expert survey consisted of three categories of questions:

- Climate change awareness in Chinese society
- The role of NGOs in climate change protection in China
- Citizen participation in climate change protection

The interviews complement the survey. The interviewees were asked for their spontaneous opinions regarding opportunities for and limitations on raising climate change awareness. They were also asked for their opinions on the role of NGOs and their assessments of the potential for and constraints on citizen participation in climate change protection. Some respondents cited only one issue or example, while other participants offered several answers. Similarities in the content of the responses of participants were noted and quantified. The results were then analysed according to broad categories – for example, institution type as well as other factors. The results served as a basis for the qualitative analysis and the focus group discussions.

## Data Analysis

Two databases containing the results of the rating scale survey and responses to the interview questions were created. Both quantitative and qualitative methods were used to create the database. The data analysis of the responses to the questionnaire consisted of regression and correlation analyses conducted with SPSS 19.0. The rating scale survey contains a limited sample with, as mentioned, 133 participating experts. The interviews conducted with 40 experts were analysed on the basis of keywords and grouped into categories of responses created on the basis of a content analysis of all interviews. The Tables 3, 4, 8, 16, 17, 18 present the findings of the interviews by listing the results for the categories counting the most answers. The limited sample size of the rating scale survey was supplemented by the interviews in order to have more data and expert input available for the discussion of the three topics. Three workshops were held following the primary data analysis to better capture the opinions of climate experts and to fix avoidable errors. Using combined methods helped to better uncover the nuanced attitudes and evaluations of experts and to compensate for the limitation of the small sample group.

## Climate Change Awareness

The quantitative analysis of the 133 rating scale questionnaires, the content analysis of the 40 interviews and the input of the experts during the focus group discussions suggest that the current media attention paid to climate change is not as low as initially presumed by the research team. The presumption of low awareness of climate change stemmed from the project team members' own perceptions of the importance of the climate change discourse in China, which were based on preliminary discussions with project partners before the study began in April 2012. However, it has been observed that awareness on pollution and, probably, climate protection issues may have increased in the course of the project as also observed by the research team when following media reports:

Journalists usually report social changes, but sometimes they signify the changes themselves. Recently, journalists flocking to a news conference on the environment outnumbered – for the first time – those at the conference about the economy on the sidelines of the ongoing annual meetings that bring together Beijing's legislators and political advisers. That reflects the growing focus of the public: Beijingers increasingly care about the environment instead of economic growth (Cao and Jin 2013: 7).

On average, the experts evaluated people's climate change awareness above "medium" in their responses to the rating scale questions. The mean of the experts' assessment of current level of media attention in China is 3.25 on a scale from 1 (very low) to 5 (very high). Here, the variations between the different categories of experts (i.e. Chinese researchers, NGO experts, Chinese project managers and international experts) are not very significant, but they still reveal some observations worth discussing.

The specific results of Table 2 show that Chinese researchers evaluated the current level of media attention to be higher than did the international experts. The results for all Chinese experts groups are above "medium". Chinese researchers and project managers are most positive about media attention on climate change issues ( $M=3.55$ ). The result for international experts ( $M=2.90$ ) is slightly below "medium" with the smallest standard deviation ( $SD=0.539$ ) of all groups. The small standard deviation means that there is a high level of agreement among international experts on the level of media

attention. The responses of the Chinese project managers vary more on this issue.

Table 2: Chinese Media Attention to Climate Change

		R	N	IE	PM	Total
Perceived Level of Preparedness 1	Very low (%)	0 (0.00)	1 (2.00)	0 (0.00)	1 (4.50)	2 (1.50)
	Low (%)	3 (7.50)	9 (18.00)	4 (19.00)	1 (4.50)	17 (12.80)
	Medium (%)	16 (40.00)	28 (56.00)	15 (71.40)	8 (36.40)	67 (50.40)
	High (%)	17 (42.50)	12 (24.00)	2 (9.50)	9 (40.90)	40 (30.10)
	Very high (%)	4 (10.00)	0 (0.00)	0 (0.00)	3 (13.60)	7 (5.30)
	Total (%)	40 (100.00)	50 (100.00)	21 (100.00)	22 (100.00)	133 (100.00)
	Mean	3.55	3.02	2.90	3.55	3.25
	Standard deviation	0.783	0.714	0.539	0.963	0.802

Rating Scale Question: "How do you rate the current level of attention to climate change issues in the Chinese media?"

Source: Authors' own compilation.

The discussion of the findings among the research team members and with focus group participants led to the analysis that international experts may compare the level of media attention in China with that in other countries where reporting on climate change issues is more prominent and differs. The media in China, according to official policies, is supposed to contribute to the country's social and economic development goals. The English-language media (*China Daily*, *Global Times* and CCTV English Channel) echo the content of the major Chinese media outlets. Thus, international experts are able to follow the level of media attention by either listening to or reading Chinese-language or English-language Chinese media.

According to one Chinese group member, Chinese experts' expectations of the media's attention may not be as high as those of international experts. However, the expectations of NGO experts may be slightly higher as their work depends on media recognition.

Many NGOs in China and elsewhere are founded or led by charismatic persons who have had to overcome many hurdles to establish a new organisation. This is all the more relevant in China, where environmental NGOs are still mainly run by first generation activists. NGO experts engaged in climate change also tend to regularly travel abroad to attend international conferences. Thus, they may compare the level of awareness in other countries, especially at the time of big conferences, with that in China.

The focus group discussions, particularly in Chengdu, highlighted the growing role and influence of social media in China, especially Weibo and WeChat. While traditional media may still be hesitant and inexperienced in writing about climate change and its consequences, the issue is frequently addressed by bloggers and social media communications. International experts may also underestimate the relevance of social media in China and therefore come to a lower evaluation of citizens' awareness of climate change issues.

Interview answers to the question "Did climate change awareness in China rise in recent years?" were generally positive. Most of the 40 experts who participated in the interviews confirm that climate change awareness had "definitely" or "gradually" increased. Only one expert believed that awareness had declined. Three experts (two NGO experts and one project manager) concluded that there was no change. This may not be very surprising for those dealing with climate change topics, but it is still a remarkable confirmation of the growing importance of the issue of climate change in China. Project managers are more directly exposed to the dissemination of government policies and the implementation of low-carbon reforms and were the most positive about the rise of climate change awareness. This is reflected in the following comment by one of our experts:

In recent years, with the media coverage of the international climate negotiations, the publicity of the concept of low carbon – as well as the national level of energy conservation, low-carbon development and greenhouse gas emission reduction policies – has greatly enhanced citizens' awareness of climate change. Now many ordinary taxi drivers know about global climate change and extreme weather events (Project Manager).

However, one Chinese NGO expert – who had just completed a major field study – opined that awareness among the mainstream

population may not have increased, as ordinary people are mainly preoccupied with their own affairs in daily lives.

Another stated that “the mass media, NGOs and the governments still do not pay enough attention to it compared to pollution and city management problems” (NGO expert).

For a third NGO expert, it seemed hard to digest the information and to implement the strategies presented at international conferences at the national level: “The climate change topic is still stuck in the level of international conferences, negotiations and big companies’ communication” (NGO expert).

Media attention has contributed most to raising awareness, but government policies and laws follow closely. It is interesting to note that the government (political system, law, policies) also figures – together with citizens’ awareness and education – highest with regard to obstacles to climate change awareness (see Table 4). International experts, however, focus less on the government and more on citizens’ awareness and education in their perception of obstacles. The answers confirm the general trend that the government is the key reference point for respondents. International experts see the role of the government less critically than do Chinese experts.

**Table 3: Factors Contributing to Climate Change Awareness in China**

Category of Expert	R(10)	N(13)	IE(10)	PM(7)	Total
Media/Publicity	5	5	6	4	20
Government Policy/Laws	5	5	7	2	19
Environmental stress	2	2	4	3	11
Education	7	2	1	0	10
Civial society NGO/ Volunteers	1	5	1	2	9

Interview Question: Which factors have, in your opinion, contributed to raise climate change awareness in China in recent years?

Source: Authors’ own compilation.

Half of the experts said that media attention is a crucial factor in raising the level of climate change awareness, followed by government policies and laws (Table 3). Respondents offered a relatively diverse spectrum of answers to this question, especially NGO ex-

perts. Their answers spread across all categories including the role of companies, especially corporate social responsibility (CSR) practices, and issues of lifestyle. The answers of project managers, who are fewer in number, covered 6 out of 11 categories and placed less emphasis on the government. One may explain this by saying that some government officers may be less impressed by the work of their own institution than others who perceive the government as very influential and powerful.

Chinese researchers pointed out that the dissemination of scientific evidence and knowledge about climate change had increased. The Internet is playing an increasing role in this: students working on environmental and climate change issues primarily access the Internet for information, while international cooperation matters are also reported online – especially in the context of major international events. One NGO expert pointed out that:

most people’s knowledge on climate change has improved, but at the same time they do not feel the strong connection between this problem and themselves (NGO expert).

Table 4: Obstacles to Raising Climate Change Awareness in China

Category of Expert	R(10)	N(13)	IE(10)	PM(7)	Total
Government (political system, law policies)	6	8	2	2	18
Citizens’ education	4	5	7	2	18
Costs and resources at the personal level	5	4	3	3	15
Macro economic conditions	2	3	3	2	10

Interview Question: Significant obstacles to further raise climate change awareness in China?

Source: Authors’ own compilation.

The following statement by an NGO expert represents the attitude of many Chinese experts:

The public believes that this topic is the government’s business and only the government can do something about it. Individuals cannot and do not need to do anything (NGO expert).

Climate change, according to the analysis of some experts, is a quite abstract subject and even more abstract than environmental protection. Experts answered that the priority of people in China would be to raise their living standards.

The differences between the expert categories are pronounced on the question of the impact of the Rio+20 summit on the climate change discourse in China. Despite the relatively small *n* (133), the difference between the positive evaluation of the Chinese researchers (M=3.20) and the negative assessment of the international experts (M=2.0) is statistically significant.

Table 5: Rio+20 Conference Impact Evaluation

		R	N	IE	PM	Total
Rio+20 Conference Impact	Very low (%)	1 (2.50)	6 (12.00)	6 (28.60)	0 (0.00)	13 (9.80)
	Low (%)	6 (15.00)	16 (32.00)	11 (52.40)	5 (22.70)	38 (28.60)
	Medium (%)	20 (50.00)	23 (46.00)	2 (9.50)	10 (45.50)	55 (41.40)
	High (%)	10 (25.00)	5 (10.00)	2 (9.50)	7 (31.80)	24 (18.00)
	Very high (%)	3 (7.50)	0 (0.00)	0 (0.00)	0 (0.00)	3 (2.30)
	Total (%)	40 (100.00)	50 (100.00)	21 (100.00)	22 (100.00)	133 (100.00)
	Mean	3.20	2.54	2.00	3.09	2.74
	Standard deviation	0.883	0.838	0.894	0.750	0.943

Rating Scale Question: What is the impact of the United Nations Rio+20 conference in Brazil on the climate change discourse in China in your opinion?

Source: Authors' own compilation.

Again, the most striking result is the difference in perception regarding the impact of the Rio+20 conference on the climate change discourse in China, with the Chinese experts being more positive in their assessment and the international experts being more negative; NGO experts are “in the middle” of Chinese researchers and international experts. Discussions among the research team led to the explanation that international experts and NGO experts may have higher expecta-

tions of the impact of international conferences and observe the reality more soberly. Chinese members in our research team also stated that NGOs would be more trusting of project initiatives at the local level and did not much believe in a trickle-down effect from the macro to the micro level. However, the relatively positive evaluation of Chinese researchers ( $M=3.20$ ,  $SD=0.883$ ) between “medium” and “high” may be considered a positive sign.

Chinese researchers do not appear to share the scepticism of international summits which has grown strongly in Europe since the perceived failure of the Copenhagen summit in 2009. In Europe, all recent summits have received rather negative press coverage. The German media, for instance, has been very critical of international climate change summits (Bojanowski 2012).

Discussions within the research team revealed that Chinese researchers in the field of climate change expect their area of work to receive a boost through international conferences attended by a high-level Chinese government delegation and the subsequent media coverage. Researchers are also more inclined (than action-oriented Chinese NGOs) to believe in trickle-down effects because they deal with climate issues in a more abstract way themselves.

The following three statements on the relevance of international cooperation shed some light on the experts' reasoning:

The visibility of international efforts has a strong potential to raise climate change awareness in China, especially in the context of important events such as the Copenhagen climate conference and other summits (Chinese Researcher).

Climate change awareness in China has risen because of the introduction of some international environmental protection concepts (NGO Expert).

The United Nations and international organisations are launching a growing number of calls on climate change protection. [...] the spirit of the Durban conference in China has been well publicised (Project Manager).

## Role of NGOs in Climate Change Awareness in China

Experts of all categories assess the level of influence of international cooperation on agenda setting to be above “medium” and slightly higher than local factors. This reflects the fact that a large portion of funding for NGO climate activity comes from foreign foundations or networks (Schroeder 2011: 25–26).

Experts, especially Chinese researchers, remembered few specific NGO campaigns. The My Earth Hour initiative received the highest number of nominations but none from an international expert. The 26 Degrees Campaign (which advocated not setting air conditioner temperatures below 26 degrees Celsius in the summer) received the second highest number of nominations, including some from international experts.

Table 6: Influence of International Cooperation on Agenda Setting of Chinese NGOs

		R	N	IE	PM	Total
International Stakeholders Influence	Very low (%)	0 (0.00)	1 (2.00)	1 (4.80)	0 (0.00)	2 (1.50)
	Low (%)	4 (10.00)	10 (20.00)	1 (4.80)	5 (22.70)	20 (15.00)
	Medium (%)	10 (25.00)	22 (44.00)	8 (38.10)	4 (18.20)	44 (33.10)
	High (%)	21 (52.50)	15 (30.00)	8 (38.10)	10 (45.50)	54 (40.60)
	Very high (%)	5 (12.50)	2 (4.00)	3 (14.30)	3 (13.60)	13 (9.80)
	Total (%)	40 (100.00)	50 (100.00)	21 (100.00)	22 (100.00)	133 (100.00)
	Mean	3.68	3.14	3.52	3.50	3.42
	Standard deviation	0.829	0.857	0.981	1.012	0.915

Rating Scale Question: How much does cooperation with stakeholders at the international level influence the agenda setting of Chinese NGOs in the field of climate change?

Source: Authors' own compilation.

The results in Table 6 reveal that the average assessment of the influence of international cooperation on NGO agenda setting in China is relatively high ( $M=3.42$ ,  $SD=0.915$ ). Chinese researchers gave the highest evaluation of international cooperation among the expert groups ( $M=3.68$ ,  $SD=0.857$ ); NGO experts gave the lowest ( $M=3.14$ ). The latter group's low estimation of the impact of international cooperation could stem from the fact that they face the most day-to-day political constraints and practical difficulties with regard to international cooperation – for example, in the context of project approvals and the attitudes of government officials towards their international cooperation ventures. Chinese researchers, on the other hand, tend to have more freedom than NGOs working at the international level because their work is more abstract and does not directly involve critical advocacy work or citizen mobilisation for campaigns.

One Chinese researcher stated that many NGOs are well connected at the international level but not deeply rooted and known in their own local areas. This expert also regarded the Ministry of Foreign Affairs as an important actor in dealing with climate change issues. In China, the Ministry of Environment (formerly the State Environmental Protection Agency) is a relatively new player, having only been elevated to cabinet level in 2008. Despite its fairly new ministry status, the Ministry of Environmental Protection continues to hide behind the Ministry of Foreign Affairs – more so than its counterparts in other countries – at the level of international cooperation.

International experts and project managers highlighted China's participation in UN conferences as an example of the country's growing involvement in climate change issues. At the Rio+20 conference, more Chinese civil society organisations participated than in previous world summits. One of our international experts published an article in the *China Daily* after the conference, in which he stated:

In Rio a large number of Chinese civil society organizations working on sustainable development were present. Under the slogan of “China Going Green” they organized a series of events introducing Chinese civil society initiatives. A report was launched which assessed the state of China's sustainable development. The report identified both the good practices adopted in China for sustainable development as well as a number of areas that require further efforts [...]. In 2012, Chinese civil society went to Rio to show to

the world what is happening in terms of sustainable development initiatives implemented by civil society in China (Schröder 2012).

Experts also credited the Internet, improved mobile phone technologies and social media for enlarging the scope of interaction between Chinese NGOs and organisations acting at the international level.

The high standard deviation between the groups of international experts and project managers may be explained by different levels of expectations and actual project experiences – for example, in terms of the difficulties of international cooperation.

Local level influence on NGO agenda setting is assessed highest by Chinese researchers (M=3.50) followed by NGOs (M=3.32). International experts evaluate the local factors lowest (M=2.86).

Table 7: Local Level Influence on Agenda Setting of Chinese NGOs

		R	N	IE	PM	Total
Local Stakeholders Influence	Very low (%)	1 (2.50)	1 (2.00)	0 (0.00)	0 (0.00)	2 (1.50)
	Low (%)	2 (5.00)	5 (10.00)	6 (28.60)	5 (22.70)	18 (13.50)
	Medium (%)	18 (45.00)	25 (50.00)	12 (57.10)	9 (40.90)	64 (48.10)
	High (%)	14 (35.00)	15 (30.00)	3 (14.30)	5 (22.70)	37 (27.80)
	Very high (%)	5 (12.50)	4 (8.00)	0 (0.00)	3 (13.60)	12 (9.00)
	Total (%)	40 (100.00)	50 (100.00)	21 (100.00)	22 (100.00)	133 (100.00)
	Mean	3.50	3.32	2.86	3.27	3.29
	Standard deviation	0.877	0.844	0.655	0.985	0.868

Rating Scale Question: How much does cooperation with stakeholders at the local level influence the agenda setting of Chinese NGOs in the field of climate change?

Source: Authors' own compilation.

On average, local level cooperation was seen to have a slightly higher than “medium” influence on NGO’s agenda setting, which is lower than the perceived influence of international cooperation. The international experts group observed a slightly lower influence and also

had a relatively low standard deviation. This could reflect their international perspective and the difficulty they would have in getting a full picture of social interactions at the local level.

We take these findings to indicate that local level cooperation with stakeholders is negatively affected by the lack of resources and the suspicious attitudes of government officials voiced in the context of social stability and public security. Chinese researchers evaluated the local factor more positively than other groups ( $M=3.50$ ,  $SD=0.877$ ). They may receive more information and better understand local policies, while not being overexposed to the daily difficulties faced by NGO experts.

One NGO expert stated that the government would impede Chinese NGOs from promoting participation at the local level. Social stability has become an issue of primary concern for many local governments. Some environmental and climate protection issues have the potential to provoke unrest should too many people get involved.

The specific results of our analysis on the challenges for NGOs revealed that the government’s role is considered a crucial factor. However, NGOs’ capacity and image were also quoted frequently with regard to the challenges faced by the NGO community in the eyes of the public.

Table 8: Challenges for NGOs to Further Advance Climate Change Action

Category of Expert	R(10)	N(13)	IE(10)	PM(7)	Total
Role of Government (Freedom, Regulations, Policies)	2	6	5	2	15
Own Capacity and Competence	1	4	3	2	10
Own Image and Identity in Society	5	1	2	1	9
Citizens’ Support	3	3	2	1	9

Interview Question: Which are the challenges for NGOs to further advance climate change action in China?

Source: Authors’ own compilation.

The research team discussed the high opportunity costs of working for an NGO in China. In a growing economy, the job prospects for educated young people are relatively good. China is still a developing,

or a newly rich, country. Few young people come from wealthy philanthropic families. There is often family pressure to focus on earning a decent salary. Furthermore, the working conditions of NGO staff cannot be compared with those in the private sector. NGOs can face many difficulties in their daily operations.

## Citizens' Participation

Given the many interview and rating scale questions on the issue of participation, we opted to separate the presentation of the results into two sections.

### Analysis of the Responses to the Rating Scale Questions

Until recently the participation of citizens in climate protection had not been an issue in China as suggested by our own observations, the discussions with the experts and the literature review. As part of our survey of experts, we asked respondents to rate Chinese citizens' engagement in several forms of climate protection: individual traffic, household level, consumption and volunteer work. The mean of all responses to all four questions is below "medium". Volunteer work is most positively evaluated ( $M=2.80$ ), while individual traffic and travel comes second ( $M=2.66$ ). Purchase of low-carbon products ranks third, and contributions at the household level receive the lowest evaluation ( $M=2.16$ ).

In all four responses, international experts are the most sceptical about the potential of Chinese people's carbon friendly behaviour.

The statistical analysis of the numeric independent variables "age" (see Table 13) and "years of international experience" (see Table 14) showed some statistically significant results. The responses show that the youngest experts with the least amount of international experience provide the most positive assessments of the potential of green volunteer work. The cost factor is regarded as a decisive obstacle to citizens' participation according to all experts.

Table 9: Perceived Level of Citizens' Preparedness in Public Transportation

		R	N	IE	PM	Total
Individual Traffic/Travel	Very low (%)	3 (7.50)	6 (12.00)	10 (47.60)	3 (13.60)	22 (16.50)
	Low (%)	13 (32.50)	12 (24.00)	6 (28.60)	4 (18.20)	35 (26.30)
	Medium (%)	17 (42.50)	19 (38.00)	1 (4.80)	8 (36.40)	45 (33.80)
	High (%)	7 (17.50)	12 (24.00)	4 (19.00)	5 (22.70)	28 (21.10)
	Very high (%)	0 (0.00)	1 (2.00)	0 (0.00)	2 (9.10)	3 (2.30)
	Total (%)	40 (100.00)	50 (100.00)	21 (100.00)	22 (100.00)	133 (100.00)
	Mean	2.70	2.80	1.95	2.95	2.66
	Standard deviation	0.853	1.010	1.161	1.174	1.058

Rating Scale Question: What is the current level of preparedness of citizens in China to contribute to climate change mitigation taking into consideration that it may involve some extra efforts and costs? Please rate their preparedness in the area of individual traffic and travel: use of low-carbon alternatives and public transport.

Source: Authors' own compilation.

The specific results show that project managers are slightly more optimistic than other groups about the potential of citizens to use low-carbon alternatives even though the average assessment is below “medium” (M=2.95, SD=1.174). Some of them are involved in programmes promoting the use of low-carbon transport or are at least more familiar with such initiatives than most other experts. Project managers also tend to work in more uniform set-ups and jobs with mid-level pay. This may make them believe that either command-and-control mechanisms like restrictions on car use or market-based mechanisms like taxes have a positive impact on the choices of individuals. Interview responses backed up the strong role assigned to the government.

The research team argues that the experts' relatively low evaluation of citizens' preparedness to use low-carbon means of transport can be explained by the lack of adequate subway networks in Chinese

cities and the stress (due to weather conditions and crowded city centres) of taking public transport.

Table 10: Perceived Level of Citizens' Preparedness in Households

		R	N	IE	PM	Total
Household Level	Very low (%)	11 (27.50)	11 (22.00)	9 (42.90)	5 (22.70)	36 (27.10)
	Low (%)	18 (45.00)	17 (34.00)	10 (47.60)	7 (31.80)	52 (39.10)
	Medium (%)	8 (20.00)	18 (36.00)	1 (4.80)	7 (31.80)	34 (25.60)
	High (%)	3 (7.50)	3 (6.00)	1 (4.80)	3 (13.60)	10 (7.50)
	Very high (%)	0 (0.00)	1 (2.00)	0 (0.00)	0 (0.00)	1 (0.80)
	Total (%)	40 (100.00)	50 (100.00)	21 (100.00)	22 (100.00)	133 (100.00)
	Mean	2.08	2.32	1.71	2.36	2.16
	Standard deviation	0.888	0.957	0.784	1.002	0.936

Rating Scale Question: What is the current level of preparedness of citizens in China to contribute to climate change mitigation taking into consideration that it may involve some extra efforts and costs? Please rate their preparedness in the area of household level contributions: participation in garbage separation/recycling and energy saving behaviour.

Source: Authors' own compilation.

Low-carbon behaviour is not yet on the agenda of most households. The evaluation of low-carbon behaviour in households is assessed below “medium” (M=2.16, SD=0.936). International Experts give the lowest evaluation with the lowest standard deviation (M=1.71, SD=0.784) of all expert groups. The Chinese members of our research group attribute the critical assessment of the international experts to the fact that participation in waste separation, recycling and energy saving at the household level is less advanced in China than in some more developed countries, especially in Germany and other northern Europe states. According to media reports, the Beijing municipal government is considering gradually introducing waste sorting. Six hundred communities adopted a pilot programme for waste sepa-

ration in 2012. The municipal government aims to extend the programme to include close to 60 per cent of Beijing residents in 2013, focusing on the separation of kitchen waste (Cao and Zheng 2013: 7).

NGO experts are slightly more positive than other expert groups. They engage in educational programmes – especially with school children and their parents – that they believe have a positive impact. The percentage of women interviewees is highest among the NGO expert group (50 per cent). The statistical analysis revealed that women’s evaluation of the potential of household level contribution to climate protection is not much higher than men’s.

Table 11: Perceived Level of Citizens’ Preparedness for Low-Carbon Consumption

		R	N	IE	PM	Total
Low Carbon Consumption	Very low (%)	5 (12.50)	6 (12.00)	8 (38.10)	3 (13.60)	22 (16.50)
	Low (%)	13 (32.50)	21 (42.00)	8 (38.10)	5 (22.70)	47 (35.30)
	Medium (%)	15 (37.50)	14 (28.00)	5 (23.80)	11 (50.00)	45 (33.80)
	High (%)	7 (17.50)	9 (18.00)	0 (0.00)	3 (13.60)	19 (14.30)
	Total (%)	40 (100.00)	50 (100.00)	21 (100.00)	22 (100.00)	133 (100.00)
	Mean	2.60	2.52	1.86	2.64	2.46
	Standard deviation	0.928	0.931	0.793	0.902	0.933

Rating Scale Question: What is the current level of preparedness of citizens in China to contribute to climate change mitigation taking into consideration that it may involve some extra efforts and costs? Please rate their preparedness in the area of household level contributions: participation in purchase of low carbon and energy saving products.

Source: Authors’ own compilation.

The preparedness to purchase low-carbon and energy saving products is evaluated slightly higher than the preparedness to contribute to climate protection with low-carbon behaviour at the household level. Here, all categories of experts give similar assessments: researchers M=2.60, NGO experts M=2.52, project managers M=2.64. NGOs are not more positive than other groups. The group of inter-

national experts shows the lowest evaluation ( $M=1.86$ ,  $SD=0.793$ ). The pattern is similar to the results on the question on household-level participation. Some of the NGO experts stated in interviews that the education level of citizens is still low. However, others admitted that higher education levels and lifestyle often go along with a bigger carbon footprint, including at the household level. Some NGOs see rising opportunities for smart and low-carbon purchases. The research team attributes the critical opinion of international experts to their implicit comparison with the situation in more developed countries.

Table 12: Perceived Level of Preparedness for Volunteer Work

		R	N	IE	PM	Total
Volunteer Work	Very low (%)	4 (10.00)	1 (2.00)	5 (23.80)	3 (13.60)	13 (9.80)
	Low (%)	11 (27.50)	6 (12.00)	10 (47.60)	8 (36.40)	35 (26.30)
	Medium (%)	18 (45.00)	24 (48.00)	6 (28.60)	7 (31.80)	55 (41.40)
	High (%)	6 (15.00)	15 (30.00)	0 (0.00)	4 (18.20)	25 (18.80)
	Very high (%)	1 (2.50)	4 (8.00)	0 (0.00)	0 (0.00)	5 (3.80)
	Total (%)	40 (100.00)	50 (100.00)	21 (100.00)	22 (100.00)	133 (100.00)
	Mean	2.73	3.30	2.05	2.55	2.80
	Standard deviation	0.933	0.863	0.740	0.963	0.981

Rating Scale Question: What is the current level of preparedness of citizens in China to contribute to climate change mitigation taking into consideration that it may involve some extra efforts and costs? Please rate their preparedness in the area of volunteer work in the field of environmental protection/ climate change.

Source: Authors' own compilation.

The results on the potential of volunteer work in the field of environmental protection and climate change show a statistically significant difference between NGO experts ( $M=3.30$ ,  $SD=0.863$ ) and international experts ( $M=2.05$ ,  $SD=0.740$ ). NGO experts' evaluation is above "medium", while Chinese researchers' and project managers'

evaluations are lower than “medium”. International experts give the lowest evaluation of all groups. None of the international experts rates the potential of volunteer work to be “high” or “very high”. This is surprising given the affiliation of many international experts in China to NGO work. This could be explained by the following reasons: First, the concept of volunteer work may be broader among Chinese experts as it may include voluntary work led by government or government-organised NGOs (GONGOs):

In China, where political power dominates the entire society, volunteering, especially the formal type, has come under the strong influence of politics. Formal volunteering has taken on a government-led character (CANGO 2012).

Second, NGOs may communicate to a greater degree with international experts about the constraints of volunteer work. International experts may compare the situation in China with the situation in developed countries, where NGOs have more freedom to mobilise volunteers and volunteerism is advocated and accepted by the public as one essential element of culture and tradition.

Third, NGOs experts are actually involved in mobilising volunteers and also know about the potential of volunteer work in China and not just the unfavourable conditions. This may explain the more positive assessment by NGO experts.

Fourth, there is a long tradition of volunteer work in China, and many major events (e.g. the Beijing Olympics in 2008, the Shanghai World Exhibition in 2010 and big trade fairs) draw on volunteer work. Other groups of Chinese experts evaluate volunteer work more positively than international experts, who may compare the situation in China with those in other developed countries.

The team found that the experts’ evaluations of volunteer work in China were significantly related to their age ( $p=0.043$ ) and international experience ( $p=0.000$ ). The respective data are presented in Tables 13 and 14:

Table 13: Volunteer Work Evaluation Based on Age Groups

		20–29	30–39	40–49	50–59	60 and older	Total
Volunteer Work	Very low (%)	1 (3.40)	5 (9.60)	4 (11.10)	1 (11.10)	2 (28.60)	13 (9.80)
	Low (%)	3 (10.30)	19 (36.50)	6 (16.70)	2 (22.20)	5 (71.40)	35 (26.30)
	Medium (%)	11 (37.90)	19 (36.50)	20 (55.60)	5 (55.60)	0 (0.00)	55 (41.40)
	High (%)	10 (34.50)	8 (15.40)	6 (16.70)	1 (11.10)	0 (0.00)	25 (18.80)
	Very high (%)	4 (13.80)	1 (1.90)	0 (0.00)	0 (0.00)	0 (0.00)	5 (3.80)
	Total (%)	29 (100.00)	52 (100.00)	36 (100.00)	9 (100.00)	7 (100.00)	133 (100.00)
	Mean	3.45	2.63	2.78	2.67	1.71	2.80
	Standard deviation	0.985	0.929	0.866	0.866	0.488	0.981

Rating Scale Question: What is the current level of preparedness of citizens in China to contribute to climate change mitigation taking into consideration that it may involve some extra efforts and costs? Please rate their preparedness in the area of volunteer work in the field of environmental protection and climate change.

Source: Authors' own compilation.

Further statistical analysis with age as the independent variable shows a significant positive correlation between the youngest expert group and a higher level of assessment of the potential of green voluntary work. The mean assessment of the youngest expert group (aged 20–29) is M=3.45; the mean assessment of the oldest experts (60 and above) is only M=1.71. This is one of the remarkable findings of the survey.

It is a positive sign for environmental activists that younger generations are optimistic about the culture of volunteer work in China. The observations and assessments of the research group comprising staff and students of Xiamen University confirm this analysis, finding that many students not only show an interest in and enthusiasm towards volunteer work but appear to do so to a higher degree than students in other countries. The young generation in China has many more opportunities for voluntary work than previous generations, who were more used to propaganda and mobilisation efforts by gov-

ernment agencies. Voluntary work has a long history in China and this spirit, so it seems, could well be directed towards supporting independent environmental organisations.

Table 14: Volunteer Work Evaluation Based on International Experience

		None	1 < Year	1-3 Years	3-5 Years	> 5 Years	Total
Volunteer Work	Very low (%)	1 (3.00)	1 (3.30)	4 (13.30)	2 (20.00)	5 (16.70)	13 (9.80)
	Low (%)	3 (9.10)	8 (26.70)	4 (13.30)	6 (60.00)	14 (46.70)	35 (26.30)
	Medium (%)	14 (42.40)	16 (53.30)	12 (40.00)	2 (20.00)	11 (36.70)	55 (41.40)
	High (%)	11 (33.30)	4 (13.30)	10 (33.30)	0 (0.00)	0 (0.00)	25 (18.80)
	Very high (%)	4 (12.10)	1 (3.30)	0 (0.00)	0 (0.00)	0 (0.00)	5 (3.80)
	Total (%)	33 (100.00)	30 (100.00)	30 (100.00)	10 (100.00)	30 (100.00)	133 (100.00)
	Mean	3.42	2.87	2.93	2.00	2.20	2.80
	Standard deviation	0.936	0.819	1.015	0.667	0.714	0.981

Rating Scale Question: What is the current level of preparedness of citizens in China to contribute to climate change mitigation taking into consideration that it may involve some extra efforts and costs? Please rate their preparedness in the area of volunteer work in the field of environmental protection and climate change.

Source: Authors' own compilation.

The analysis of international experience as an independent variable shows a significantly negative correlation between the degree of international experience and the potential of green voluntary work. The expert group with no international experience evaluate the potential of green voluntary work the highest (M=3.42, SD=0.936); the two groups with the most experience, the lowest. Experts who participated in the focus groups highlighted that more international experience, especially in countries with a higher degree of political freedom, may lead to a more critical attitude towards the scope of green voluntary work in China. Interestingly, locally grown expertise tends to be less

pessimistic about green participation than expertise developed in a transnational context.

Table 15: Decisiveness of Cost Factor in Climate Protection Participation

		R	N	IE	PM	Total
Cost Factor	Very low (%)	1 (2.50)	0 (0.00)	0 (0.00)	0 (0.00)	1 (0.80)
	Low (%)	0 (0.00)	5 (10.00)	4 (19.00)	0 (0.00)	9 (6.80)
	Medium (%)	8 (20.00)	10 (20.00)	1 (4.80)	4 (18.20)	23 (17.30)
	High (%)	21 (52.50)	20 (40.00)	7 (33.30)	10 (45.50)	58 (43.60)
	Very high (%)	10 (25.00)	15 (30.00)	9 (42.90)	8 (36.40)	42 (31.60)
	Total (%)	40 (100.00)	50 (100.00)	21 (100.00)	22 (100.00)	133 (100.00)
	Mean	3.98	3.90	4.00	4.18	3.98
	Standard deviation	0.832	0.953	1.140	0.733	0.913

Rating Scale Question: What is the current level of preparedness of citizens in China to contribute to climate change mitigation taking into consideration that it may involve some extra efforts and costs? Please rate the decisiveness of the cost factor for low-carbon behaviour.

Source: Authors' own compilation.

Most of the experts believe that the cost factor plays a highly decisive role (all Ms≈4) in influencing people’s climate friendly behaviour in China. NGO experts are a little bit more idealistic than other expert groups and evaluate it slightly below “high” (M=3.90, SD=0.832). Project managers, not surprisingly, are most convinced that the cost factor makes a big difference and show the lowest standard deviation (M=4.18, SD=0.733).

### Analysis of Interviews on Factors Influencing Participation

In this section we discuss the results of the interviews and the focus group discussions.

The interview responses proved that institutions matter to experts a great deal. Most experts identified the government (23 nomi-

nations from 40 experts) as how to win citizens’ participation. Civil society ranks second (17 nominations). Fewer responses fall in categories referring to actual climate change exposure and individuals’ experiences. An exception is the question on the limitations to winning citizens’ participation. Experts refer as often to the economic situation and living conditions as they do the role of government (policies, laws, political system).

Experts refer more often to NGO activities than to other factors when asked about the potential of institutions and organisations to promote citizens’ participation. Responses falling into the NGO category score highest (22 nominations from 40 experts), followed by government (19), media (9) and education and research institutions (8).

**Table 16: Opportunities for Raising Citizen’s Participation in Climate Change Action**

Category of Expert	R(10)	N(13)	IE(10)	PM(7)	Total
Government	5	8	6	4	23
Civil society	3	7	3	4	17
Household	4	0	7	1	12
Media	3	4	1	2	10

Interview Question: Where do you see opportunities to win citizens’ participation for climate change action?

Source: Authors’ own compilation.

It is worth noting that international experts did not mention civil society as often as did other expert groups. They see, unlike NGOs, a high potential for household contributions. International experts may compare the household-level contributions to those in their own countries. In Germany, household-level awareness is higher, with waste separation rates and recycling efforts serving as a good indicator of this.

Regarding limitations, many experts do not regard China’s political system to be very conducive to promoting citizens’ participation in climate change protection. One international expert claimed that “there are both top-down and bottom-up opportunities, but the top-down is of more potential to win the participation” (International Expert).

**Table 17: Limitations to Raising Citizen's Participation in Climate Change Action**

Category of Expert	R(10)	N(13)	IE(10)	PM(7)	Total
Economic situation and living condition	5	3	5	4	17
Government (policies, laws, political system)	2	8	5	2	17
Citizen education and awareness	5	2	4	1	12

Interview Question: Where do you see the limitations to win citizens' participation for climate change action?

Source: Authors' own compilation.

The role of the government, the economic situation and living conditions were identified as the crucial limitations to winning citizens' participation. Not surprisingly, NGOs are more critical of the government than other expert groups; this is because they feel the limitations when planning and organising their activities.

The following statements reflect some critical attitudes on the role of the Government:

Government planning impedes citizens' participation in actions. (NGO Expert)

There are no real free and independent media in China. (NGO Expert)

There are limitations for NGO activities as well as citizen activities under the current circumstances in China. (International Expert)

Statements referring to the economic situation include the following:

the polarisation of people's economic situation (Chinese Researcher) and

the pressure of social competition, which makes citizens put more time on job-hunting and keeping their job (Project Manager).

Some experts also focused on the attitude and behaviour of citizens:

Most citizens lack social responsibility with regard to climate change problems. They consider climate change issues as none of their business (NGO Expert).

Citizens are unwilling to change their present lifestyle (International Expert).

Table 18: Potential of Institutions to Promote Citizens' Participation

Category of Expert	R(10)	N(13)	IE(10)	PM(7)	Total
NGO (international and domestic)	4	10	5	3	22
Government	6	5	7	1	19
Media, internet, SNS e.g. Weibo	2	2	5	0	9
Education and research institution	3	1	1	3	8

Interview Question: Which institutions/ organisations/ actors have a good potential to promote citizens' participation?

Source: Authors' own compilation.

It is interesting that NGOs rank top when experts were asked about the potential of institutions that could promote citizen participation. Apparently, experts distinguished between promoting awareness and participation. Awareness may be promoted by a quasi-omnipresent government, but participation requires activities from NGOs. However, government also ranked high as a category of reference. Respondents paid more attention to local governments in their answers to this question than in previous questions. It was acknowledged that the government already contributed significantly to raising awareness on climate issues, but more attention and commitment was still expected:

Under the Chinese cultural and political system, the proactivity and enthusiasm for public participation is in a poor state. This is directly caused by the top-down decision-making system. The Chinese government at all levels has more power and ability than any other institution or individual to address and guide the public (Chinese Researcher).

The responses also include more complex answers:

I believe that we need an alliance of scientists, experts, environmental organisation representatives, business and state authorities in order to show the public that cooperation is needed for successful climate protection. It is about creating trust and belief.

Comprehensive problems need comprehensive solutions. Mainstream action is the key to success. Maybe some local-level climate initiative formed by such an alliance could get high attention and could motivate the public to join in (International Expert).

Universities, schools and the media play an important role for some of the respondents, in particular Chinese researchers and project managers. Chinese researchers and NGO experts highlighted the role of social media, especially Weibo and Weixin, during the focus group discussions.

## Conclusions

The nascent issue of climate change in China is – unlike in Germany – not (yet) a topic of controversial debate. It ranks after concerns about economic growth, corruption, employment and social welfare (Hong 2012). However, it has entered the political debate – notably via the issue of pollution, which greatly impacts the daily life of citizens in many Chinese cities. Nearly all the experts involved in this survey were of the opinion that climate change awareness is growing in China, but is not yet a priority concern – as also demonstrated by Hong (2012) and the NGO Green Beagle (2012).

The results of our survey indicate that the amount of media attention given to climate change issues is growing in China. Social media already plays an important role in spreading the message of climate change. Traditional media has remained relatively passive on the issue but has also increased its coverage of issues related to climate protection, in particular pollution. Many of the Chinese experts in the study were of the opinion that few journalists had adequate knowledge of climate change or of the work of NGOs in this area. They felt that leading media outlets, especially CCTV, are heavily influenced by the government.

The overall analysis of the interviews reveals that the role of the government was an important factor for respondents, but not the only one. The government-centred perspective is not surprising in the political context of mainland China. Other important response categories to emerge from the analysis of the interviews are the role of the media, the role of civil society and volunteers, and the importance of education. The abstract nature of climate issues was cited by many

experts when conjecturing about the limitations of mainstream awareness raising.

Expert opinion on people's attitudes towards climate protection issues is not very diverse in China. We may state that the opinions of experts in China mutually reinforce rather than contradict each other. The relatively high evaluation by Chinese experts of the impact of the Rio+20 summit on climate change discourse in China is one surprising finding. Dissatisfaction with international conferences is growing and this discontent was manifest in the attitude of the international experts who participated in this study. The positive assessment of the potential of volunteer work by young experts and by those with little international experience is another striking result.

The responses of female and male experts did not differ much. Women are slightly more positive regarding the potential of low-carbon transport, low-carbon consumption and green volunteer work; while men place slightly more importance on cost factors. Many of the experts were of the opinion that NGOs also play a role in educating the public, especially at the grassroots level.

## References

- Balsiger, Jörg, Miriam Prys, and Niko Steinhoff (2012), *The Nature and Role of Regional Agreements in International Environmental Politics: Mapping Agreements, Outlining Future Research*, GIGA Working Papers, 208, Hamburg: GIGA.
- Bojanowski, Axel (2012), Wirkungslose Uno-Konferenzen: Forscher fordern Ende der Weltklimagipfel, in: *Spiegel Online*, 13 December, online: <[www.spiegel.de/wissenschaft/natur/gescheiterte-uno-konferenzen-forscher-wollen-klimagipfel-abschaffen-a-872633.html](http://www.spiegel.de/wissenschaft/natur/gescheiterte-uno-konferenzen-forscher-wollen-klimagipfel-abschaffen-a-872633.html)> (13 March 2013).
- CANGO (2012), China and Volunteering – Logic of Politics and Logic of Culture; in: *CANGO Newsletter*, 82, 4, 4–6.
- Cao, Yin, and Haixing Jin (2013), Environment Becomes more Important, in: *China Daily*, 25 January, 7.
- Cao, Yin, and Xin Zheng (2013), Officials Consider Gradual Phase-in of Garbage Sorting, in: *China Daily*, 25 January, 7.
- Chen, Gang (2009), *Politics of China's Environmental Protection. Problems and Progress*, Singapore: World Scientific.
- Conrad, Björn (2010), Bureaucratic Land Rush, in: *Harvard Asia Quarterly*, Spring, 52–64.

- Fogarty, David (2012), Despite Weak Economy, CO<sub>2</sub> Emissions to Grow 2.6 Percent in 2012: Study, in: *Reuters*, 2 December, online: <[www.reuters.com/article/2012/12/02/us-climate-emissions-idUSBRE8B10AT20121202](http://www.reuters.com/article/2012/12/02/us-climate-emissions-idUSBRE8B10AT20121202)> (19 March 2013).
- Fu, Rong (2009), *Study on Public Participation in Low-carbon City Construction*, thesis submitted in partial fulfillment of the requirements for the degree of Master of Management, Hubei: Hua Zhong University of Science and Technology.
- Green Beagle and Bei Jing Shi Chao Yang Qu Da Er Wen Environment Institute (2012), *Carbon Emissions in the Eyes of the Public – Case Studies of Impact of Family Lifestyle on Carbon Emissions in Pilot Provinces and Cities*, Beijing: Green Beagle Project Report.
- Heberer, Thomas (2012), *Some Reflections on the Current Situation in China*, Duisburger Arbeitspapiere Ostasienwissenschaften, 90, Duisburg: Institute of East Asian Studies.
- Hong, Dayong (2012), *Climate Change Perception of the Chinese Population*, paper presented at the Chinese-German conference “Rio Plus 20 follow up: Sustainable Economic Development through Resource Efficiency and Climate Protection”, Conference organised by Xiamen University, School of Public Policy, Xiamen, 2 December.
- Kim, So Young (2009), *Asian Public Opinion on Climate Change and Its Implications on Climate Change Policies*, paper prepared for the International Conference: Environmental Policy: A Multinational Conference on Policy Analysis and Teaching Methods, 11–13 June, Seoul.
- Kuhn, Berthold (2013), Conferences of Consequence, in: *Development and Cooperation*, 2, 17 January, online: <[www.dandc.eu/en/article/global-environment-summits-rio20-trigger-new-initiatives-china](http://www.dandc.eu/en/article/global-environment-summits-rio20-trigger-new-initiatives-china)> (13 March 2013).
- Kuhn, Berthold (2011), Nutzung und Wertschätzung von BTI und FHI in Wissenschaft und Praxis, in: *Zeitschrift für Politikwissenschaft (Journal of Political Science)*, 21, 4, 577–602.
- Oberheitman, Andreas, and Eva Sternfeld (2009), Climate Change in China – The Development of China’s Climate Policy and Its Integration into a New International Post-Kyoto Climate Regime, in: *Journal of Current Chinese Affairs*, 38, 3, 135–164.
- Schröder, Patrick (2012), Countries Show Low Ambition on Rio+20, in: *China Daily*, 27 June.

- Schröder, Patrick (2011), *Climate Change Activism in China. More than Meets the Eye*, Beijing, Essen: Heinrich-Böll Foundation, Asienhaus.
- Tangen, Kristian, Gorild Hegelund, and Jorund Buen (2002), The Position of the Chinese Government in International Climate Change Negotiations, in: *Journal of World Economic and Politics*, 8, 34–40.
- United States National Research Council (2010), *Advancing the Science of Climate Change*, Washington, DC: The National Academies Press.
- Wübbecke, Jost (2010), *The Power of Advice. Experts in Chinese Climate Change Politics*, Oslo: Fridtjof Nansen Institute.
- Xu, Buhua, and Jiang Ye (2011), A Tentative Study on the NGO Role in Coping with Global Environmental Degradation and Climate Change, in: *The Journal of Shanghai Administration Institute*, 12, 1, 79–88.
- Yu, Hongguan (2004), Knowledge and Climate Change Policy Coordination in China, in: *East Asia*, Fall, 21, 3, 58–77.
- Zhang, Haibin (2013), China and International Climate Change Negotiations, in: *WeltTrends*, March, online: <[http://welttrends.de/res/uploads/Zhang\\_China-and-International-climate-change-negotiations.pdf](http://welttrends.de/res/uploads/Zhang_China-and-International-climate-change-negotiations.pdf)> (1 November 2013).
- Zhang, Haibin (2010), *Accelerating the Internationalization of Chinese Environmental NGOs: A New Role China Can Play in Improving Global Environmental Governance*, *International Environmental Governance Forum 2010*, Conference Proceedings, 8 August, Beijing.

## Annex

### *Questionnaire seeking responses on a rating scale from 1 (very low) to 5 (very high)*

1. Climate change is now on the top of the agenda of international summits and high-level conferences in which Chinese leaders and experts participate. How do you rate the current level of attention to climate change issues in Chinese media?
2. What is the impact of the United Nations Rio+20 conference in Brazil on the climate change discourse in China in your opinion?
3. How much does cooperation with stakeholders at the international level influence the agenda setting of Chinese NGOs in the field of climate change?
4. How much does cooperation with stakeholders at the local level influence the agenda setting of Chinese NGOs in the field of climate change?
5. What is the current level of preparedness of citizens in China to contribute to climate change mitigation taking into consideration that it may involve some extra efforts and costs?
  - 5.1 Individual traffic/travel: use of low-carbon alternatives and public transport
  - 5.2 Household level: participation in garbage separation/recycling and energy
  - 5.3 Consumption: purchase of low carbon and energy saving products
  - 5.4 Volunteer Work in the field of environmental protection/climate change
6. How decisive is the cost factor in influencing people's climate friendly behaviour in China?

The interview questions were open questions. The experts were requested to provide brief answers. Responses were received either in a face-to-face interview, by telephone or by email.

## Open Questions:

### *Climate change awareness in Chinese society*

1. Did climate change awareness in China rise in recent years?
2. Which factors have, in your opinion, contributed to raise climate change awareness in China in recent years?
3. Which are the most significant obstacles to further raise climate change awareness in China?

### *Role of NGOs in climate change in China*

4. Please name some outstanding successful NGO initiatives (e.g. awareness raising campaigns/projects/dialogue) in China in the field of climate change?
5. Which are the challenges for NGOs to further advance climate change action in China?

### *Citizens' participation in climate change*

6. Where do you see opportunities to win citizens' participation for climate change action?
7. Where do you see limitations to win citizens' participation for climate change action?
8. Which institutions/organisations/actors have a good potential to promote citizens' participation?