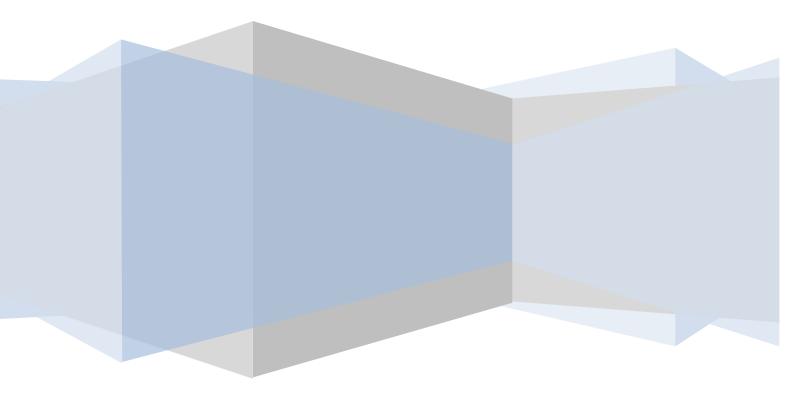
Task Group on Consumer and Societal Dimension (CASD) of ISO Technical Committee on Nanotechnologies (ISO TC229)

Study on

Engagement of Consumer and Societal Related Organizations in TC229 National Member Bodies



SURVEY OF ISO TC229 MEMBER BODIES ENGAGEMENT OF CONSUMER AND SOCIETAL RELATED ORGANIZATIONS IN TC229 NATIONAL MEMBER BODIES (NMB)

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I. INTRODUCTION

The ISO Technical Committee on Nanotechnologies (ISO TC229) Task Group on Consumer and Societal Dimensions (CASD) of Nanotechnologies was formed by the TC229 Committee to ensure that the Technical Committee has mechanisms for receiving inputs from relevant consumer and societal organizations. During the TC229 meeting in Maastricht, a resolution was passed that a survey to be conducted among TC229 National Member Bodies (NMB) in order to determine how the members of TC229 engaged with some sectors of society and in particular with organizations representing the interest of consumers and civil society in the work of their member organization. Recommendations and proposals from consumer and societal organizations would be made on how consumer, environmental, and societal concerns can be integrated into the processes of developing nanotechnology standards by ISO TC229.

The results of the survey are intended to help TC229 to better engage those who want to be involved in the responsible development and/or understanding of nanotechnology and standardization. If, however, the lack of engagement is because of barriers, real or perceived, this survey would help in identifying opportunities for member bodies to receive assistance in removing barriers and improving participation by consumer and societal group.

Identification of best practices from NMB will allow members of the Technical Committee to better engage with society at large and in particular with organizations representing the interest of consumers and civil society in the work of their member organization. The compiled results of this survey will be reported to the ISO Technical Committee on Nanotechnologies (ISO TC229) so as to provide inputs to further refine the TC229 roadmap for future development of nanotechnology standards.

2. EXECUTIVE SUMMARY

This report presents results of a study conducted among TC 229 national member bodies (NMB) on the engagement of consumer and societal related organizations in their organizations. The main objectives of the study are to determine the level of involvement of those organizations and to identify barriers to their participation in the NMB activities. The study utilized a cross-sectional research design utilising survey method. Data was collected using a questionnaire and results were analysed using summary statistics. A total of 13 countries responded to the survey from a total of 34 member countries and one observing member country out of ten countries. The findings presented are therefore based on a total of 14 countries who responded to the survey.

The summary of the findings are as follows:

• Types of organization involved

Six different types of organizations are found to be engaged in TC229 NMB activities namely consumer organization, environmental organization, labor organization, societal organization, university and institutes. Among these participating bodies, societal organization is found to be the least active member with only one country associated with it.

• Level of involvement

These consumer and societal related organizations are active in attending NMB meetings, often engaged in standards making processes but having less opportunity to propose new topics or develop proposals for NWIPs.

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However, they are involved in other activities such as national/international panel of experts for nanotechnologies projects, research projects, and diffusion activities and assist in development of policy and regulations on nanotechnology.

• Efforts by TC229 NMB

On the whole, NMBs do make efforts to invite these organizations on a somewhat regular basis and extend invitations to a number of organizations. Less than 50% of the countries organised workshops in order to engage them in standardization efforts but other practices such as teleconferencing, public consultation, information dissemination through website/newsletter were adopted to enhance their participation.

• Barriers of participation

The main barriers to involvement by the consumer and societal related organizations in NMB activities are found to be due to lack of technical understanding on nanotechnologies, travelling expenses incurred, lack of personnel and time. In order to facilitate their involvement, other means are utilized such as providing financial assistance, information dissemination via various channels, teleconferencing, face to face discussion, localised meeting venues, open invitations, fees reduction, conduct parallel discussion with NGOs during NMB meetings and organizing seminar.

• Efforts by consumer and societal related organizations to overcome barriers

These organizations have undertaken various initiatives to enhance their participation in NMB activities such as fundraising, sharing of human resources through partnership/networking, financial assistance by own organization, prioritization of activities, nomination of representative to be member of NMB and joint publications.

• Level of success to overcome barriers

From the perspectives of the NMB, the efforts undertaken by them to overcome barriers in participation in TC 229 activities by consumer and societal related organizations are somewhat more successful as compared to initiatives by the later.

• Importance of nanotechnology

On the whole, consumer and societal related organizations regard nanotechnologies as an important issue. Similarly, nanotechnologies are a high priority in most of the countries surveyed.

The results of the study indicate that all the countries surveyed do have some form of mechanisms to receive inputs from various types of consumer and societal related organizations. Both NMB and consumer and societal related organizations undertake various initiatives in order to overcome the barriers in participation of NMB activities but with varying degree of success. There are best practices ascertained in this study that could be modelled by other countries in order to enhance the involvement and participation of various organizations in NMB activities.

3. OVERVIEW OF THE STUDY

During the 18 May 2011, Consumer and Societal Dimensions Task Group (CASD TG) meeting in St. Petersburg, Russia, it was agreed that initial drafts of the open format (respondents formulate their own answers) and closed format (a number of alternative answers are provided) type of questionnaires related to the TC229 Members' engagement of consumer and societal related organizations to be sent out to a limited group of NMB. This is to gauge the effectiveness of the two approaches to the survey. The pre-test was carried out between June and July 2011 where six countries were invited but only three participated in the pre-test of the instrument. Based on the pre-test results and inputs, the closed format

survey questionnaire was found to be more favourable as it yielded more useful information. It was then modified accordingly.

The first wave of survey was conducted soon thereafter and the final responses were received from the Secretariat of the CASD TG in October 2011. The target respondents for the survey were 34 participating countries and ten observing countries of TC229 National Member Bodies. A total of 12 countries responded to the survey, yielding a response rate of only 27.3%. The preliminary findings were presented and discussed at the TG CASD meeting during 13th Meeting of ISO/TC229 on Nanotechnologies, 14-18 November 2011, Johannesburg, South Africa. It was decided then that a second wave of data collection is to be made in order to improve the response rate. Only two additional countries responded to the survey by the end of March 2012, giving a final response rate of 31.8%. Final data analysis was then made based on the feedback obtained from 14 countries. The final results of the survey were reported and discussed at TG CASD meeting during the 14th Meeting of ISO/TC229 on Nanotechnologies, 11-15 June 2012 in Stresa, Italy.

4. STUDY RESULTS

This section of the report summarizes the findings of the study.

Background of Respondents

A total of 14 member countries have participated in this survey. They are Australia, Japan, Argentina, United States of America, United Kingdom, Poland, Canada, Switzerland, Italy, Malaysia, Israel, Netherlands, France and Germany.

Involvement with Consumer, Environmental, Labor and Societal Organizations Regarding TC299 Activities It was observed that the National TC299 member bodies had engaged with several organizations including consumer, environmental, labour, societal, university and institutes. Figure 1 shows that the highest involvement is with consumer associations (8 countries) followed by environmental (7), labour organization (6), universities (4), societal organization (3) and institutes (2).

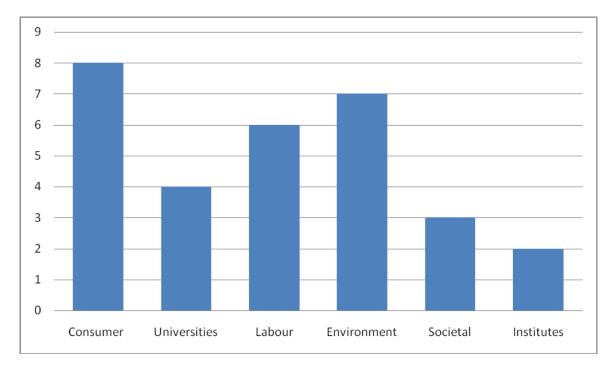


Figure 1: Number of Organisations

The respondents were also requested to indicate the nature of involvements with the above organizations in their TC229 National Member Body. The findings show that the most common involvement is in the form of attending meetings with the mean score 3.6, followed by opportunities in standards making processes (3.3). The lowest means score which indicates the least involvement is in respect of having made proposals for NWIPs. This result shows that although the organizations have attended meeting and have been given opportunity in standard making process, they rarely proposed NWIPs and/or propose topics for standard development (Table 1).

Nature of Involvement	Very often (n)	Sometimes (n)	Rarely (n)	Never (n)	Mean
Attending NMB meetings	10	3	0	1	3.6
Having opportunities in standards making processes	8	3	2	1	3.3
Having opportunities to propose topics /work items	6	3	4	1	3.0
Have made proposals for NWIPs	0	5	2	6	1.9
Other involvements	3	0	1	1	3.0

Table 1: The Nature of Involvement

In order to illustrate the nature of involvement, the respondents were expected to describe other types of involvement (if any) with the above organizations in standard making efforts within the respondents' National TC299 Member Body. Some respondents have responded to the questions. Other forms of involvements include:

i. Engaged as panel experts in projects related to nanotechnology at national and international level.

ii. Publishing various technical reports such as ISO Technical Report on Nano Risk Management and Nano Risk Framework.

iii. Involving in promotion and diffusion activities.

- iv. Being a member of CASD Task Group & Sustainability Task Group.
- v. Carrying out research on the impact of nanotechnology on consumers e.g. public health.
- vi. Assisting regulatory, standards and policy development such as Consumer Product Safety Standards.
- vii. Preparing a chapter on the Consumer Trends Annual Report for Industry.
- viii. Disseminating information on the workings of TC299 to other organizations and get their feedbacks.
- ix. Creating an information portal on nanotechnology.

Efforts Undertaken to Engage Consumer, Environmental, Labor and Societal Organizations

This survey also intends to determine the efforts taken by the National TC299 in their respected countries in engaging various organizations in their activities. Among the expected efforts that were asked comprised of invitations to participate in TC299 activities, organize the workshops and establish liaisons with the organizations in the activities.

i. Invitation to participate

The respondents were asked to state the number of organizations that they have contacted and invited to participate in their activities. Table 2 shows the responses of the respondents where it is observed that the number of organizations invited varies from one to eight while two reported that had not taken any initiatives at all. Two countries have taken a great deal of efforts in trying to engage other organizations (> 10 organizations) in their TC229 activities and this commendable endeavour should be emulated by other member countries.

Number of organizations	Countries (n)
1	1
2	1
3	2
4	1
5	1

Table 2:	Number	of or	ganization	s invited

6	1
7	1
8	1
More than 10	1
50	1
None	2
Uncertain	1

Regarding the frequency of invitations extended, six respondents claimed that they have contacted the organizations on a regular basis, while four respondents had done so occasionally while the other four respondents reported that they rarely invited them (Table 3).

Table 3: The Frequency of Invitations

Frequency of invitations	Number of countries
Regularly	6
Occasionally	4
Rarely	4

ii. Conducting Workshops

Besides invitation, the respondents were also asked on whether their TC299 NMB had organized workshops in order to engage these organizations to participate in standardization efforts. Five respondents had claimed that they have made such effort while seven respondents had claimed otherwise. The summary of the finding can be seen in Table 4.

iii. Establish Liaisons

Another question that has been asked is whether the respondents have made efforts to establish liaison or linkages with these organizations. Five respondents informed that they have done so, while the remaining seven did not (Table 4).

Table 4: Workshops and Liaisons

The efforts	Yes (n)	No (n)
Organizing workshops	7	7
Establishing liaison	8	6

iv. Other Practices

Apart from the above efforts, the respondents were also requested to specify other practices in order to facilitate participation by consumer, environmental and societal organizations in their respective countries. Among the responses are;

- Publication in magazines and newsletter.
- Disseminate information through website.
- Financial support.
- Teleconferencing.
- Public consultation on developed documents.
- Participation in TCC299 meetings. Nevertheless, only the industries participated in the meetings.
- Participation in national debate.

Barriers to Consumer, Environmental, Labor and Societal Organizations Participating in National TC229 Member Body Activities

Table 5 presents the barriers of consumer, environmental, labor and societal organizations participating in National TC229 Member Body activities. Based on the findings, lack of personnel (mean = 3.2), expenses incurred, i.e. travelling (mean = 3.2), lack of time (mean = 3.0), and lack of technical understanding on nanotechnologies (mean = 3.0) are the main barriers to participation. However, cost of memberships (mean = 2.3), lack of information (mean = 2.3) and limited accessibility to information on TC 229 (mean = 2.3) are of lesser obstacles for their involvement in National TC229 Member Body activities. In order words,

availability of information and accessibility to information on awareness pertaining to standardization and TC 229 are satisfactory.

	Barriers	Strongly agree	Agree	Disagree	Strongly disagree	Mean
1	Cost of memberships	2	4	4	4	2.3
2	Expenses incurred (i.e. Travelling)	5	7	2	0	3.2
3	Lack of information	0	6	6	2	2.3
4	Limited accessibility to information	0	5	8	1	
5.	Lack of technical understanding on nanotechnologies	3	9	1	1	2.3
6.	Lack of personnel	8	4	0	1	3.0
7	Lack of time	6	4	2	0	3.2
8	Don't know	2	2	2	0	3.0

Table 5: Barriers to Consumer, Environmental, Labor and Societal Organizations Participating in National TC229 Member Body activities

Scale: 1 (strongly disagree) to 5 (Strongly agree)

There are various efforts that have been undertaken by National TC229 Member Body to address the above barriers. Table 6 shows the list of efforts reported by respective countries y to overcome them. Two countries mentioned that they disseminate current information related to National TC229 Member Body activities via internet. Meanwhile, three countries indicated that they have been using teleconference to circulate the information on national TC229 activities. It seems that Information Communication Technology (ICT) is a viable tool to disseminate information about TC229 NMB activities.

Table 6: Effort to Overcome the Barriers by National TC229 Member Body

Efforts to Overcome the Barriers by National TC229 Member	Number of Countries
Body	
Disseminate current information in the Internet	2
Teleconferencing	3
Publication in Journal to interested groups	1
Organize the meetings at the location which such organization are present	1
Open invitations to organizations to join	2
Organize seminar	1
Reduce numbers of meeting to increase participation	1
Reduction of membership fees	1
Pays some token to those attending the standardization meetings	1
Face to face discussion between representatives of TC 299 with NGO	1
National Member Body provides funding for consumer representative to attend ISO TC229 meetings	1
Update information to the NGOs during national TC299 meetings	1

Besides using ICT, several countries adopt other practices to enhance involvement with TC299 activities such as publication in journals and their dissemination to interested groups, organize the meetings at the location where such organization are present, open invitations to organizations to join the activities, organize seminars, reduce numbers of meeting in order to increase participation, reduction of membership fees, face to face discussion between

representatives of TCC 299 with NGO, pays some token to those attending the standardization meetings, provides funding for consumer representative to attend ISO TC229 meetings and update information to the NGOs during national TCC299 meetings.

Each country was asked to rate the level of success of their efforts undertaken to overcome the barriers identified (Table 7). Eight nations rated very good/good while three rated fair and one rated poor level of success of their efforts to overcome those barriers. There are two missing data. Overall, National TC229 Member Bodies perceived that there was a moderate level of success in overcoming those barriers as indicated by the mean of 2.4 on a scale of 1 (poor) to 4 (very good).

The level of success effort by National TC229	Frequency
Very good	2
Good	6
Fair	3
Poor	1

Table 7: Level of Success by National TC229 Member Body to Overcome Barriers

Scale: 1(poor) to 4 (very good); Mean=2.4

There are also diverse efforts that have been undertaken by the consumer, environment, labor and societal organizations to overcome the barriers identified in this study (Table 7). Three countries reported that they have to find their own funding to attend National Member Body meetings and international meetings. Meanwhile, two countries have made linkages with other organization to share human resources in order to overcome lack of personnel. In addition, several countries reported other efforts such as publication in journal, encourage involvement of experts from the University for their participation in committees by providing logistical and financial support such as membership fees, travelling and accommodation costs, prioritization in activities to be involved, the NGOs nominate their representatives to be the member of the TCC299 and update information to the NGOs during national TCC299 meetings.

Table 8: Effort to Overcome the Barriers by Consumer, Environment, Labor and
Societal Organizations

Efforts to overcome the barriers by consumer, environment, labor	Number of
and societal organizations	Countries
Fundraising	3
Partnership & Networking with other organizations to share human resources	2
Publication in journal	1
Encourage involvement of experts from the University for their participation in committees by providing logistical and financial support such as membership fees, travels and accommodation costs.	2
The NGOs nominate their representatives to be the member of the TCC299	1
Update information to the NGOs during national TCC299 meetings	1
Prioritization in activities to be involved	1
Encourage involvement of their members to participate in the ISO TC229 by providing funding	1

Table 9 indicates the level of success rated by the NMB on the efforts made by consumer, environment, labour and societal organization to overcome participation barriers. Eight countries rated the level of success of those efforts undertaken with four missing data. Two and three counties rated 'very good' and 'good' level of success while one country rated 'fair' and two countries rated 'poor' level success in overcoming those barriers.

Table 9: Level of Success of Consumer and Societal Related Organizations to Overcome Barriers

The level of success efforts by consumer, environment, labor and societal organization	Frequency
Very good	2
Good	3
Fair	2
Poor	2

Scale: 1(poor) to 4 (very good); Mean=2.4

On the whole, NMB considered a moderate level of success (mean = 2.4) on the efforts undertaken by those organizations to resolve their participation problems.

Regarding the question on the level of importance of nanotechnologies to the consumer, environment, labor and societal organization (Table 10), eight countries indicated high, followed by five countries showing moderate and only one country indicated low. Overall mean of 2.4 shows that ISOTC229 NMB perceived that these organizations considered Nanotechnologies to be somewhat an important issue. Similarly, it is perceived that Nanotechnologies are fairly important (m=2.6) to the nations surveyed

Table 10: The Level of Importance of Nanotechnologies

The level of importance of nanotechnologies	High	Moderate	Low	Mean
To the consumer, environmental, labor and societal Organizations you have contacted	7	6	1	2.4
To your country region in general	9	1	4	2.6

Scale: 1(low) to 3 (high)

5.0 CONCLUSION

The main objectives of the study were to determine the level of involvement of consumer, environment and labour organizations and to identify barriers to their participation in the NMB activities. The organizations were foremost in engaging themselves with NMB activities notably with regards to attending meetings and participation in standards making processes but lack of involvement in development of new work item proposals. Some of them were also involved in nanotechnology related research, publications and dissemination of nanotechnology information to the public. The main perceived barriers of the organizations for participation in NMB activities were found to be related to lack of time, insufficient funding and personnel and lack technical understanding of nanotechnology. Most NMB and the respective organizations have undertaken various strategies to address those issues with fairly good level of success.

The findings in general indicate that ISOTC 229 NMB who participated in the survey have engaged various consumer and societal organizations in some of their activities. NMBs have also undertaken steps to encourage and enhance involvement of those organizations specifically to nanotechnology standards development in particular and promotion of awareness and education of nanotechnologies in general. The practices, strategies and approaches described above are useful references that can be adopted and adapted by NMB of ISOTC 229 to improve their engagement with society at large and specifically with organizations representing the interest of consumers and civil society in their respective countries.

ACKNOWLEDGMENT

Thank you to all CASD members who were involved in this project, all the responding TC229 National Member Bodies and Ms Heather Benko for her co-ordination support. Our appreciation to Dr. Aini Mat Said and her team consisting of Dr. Elistina Abu Bakar, Dr. Norhasmah Sulaiman and Prof Dr. Fakhru'l-Razi Ahmadun of Universiti Putra Malaysia who have assisted in the development of the instrument, analysis of the data and production of the report.

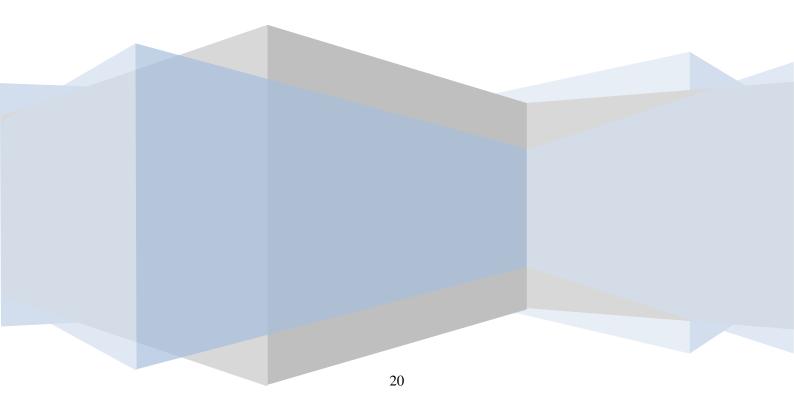
Dr. Shaun Clancy

Appendix: Questionnaire

Task Group on Consumer and Societal Dimension CASD

SURVEY OF TC 229 MEMBER BODIES

Engagement of Consumer and Societal Related Organizations in TC229 National Member Bodies (NMB)



Dear colleagues

The ISO Technical Committee on Nanotechnologies (ISO TC229) Task Group on Consumer and Societal Dimensions (CASD) of Nanotechnologies was formed by the TC229 Committee to ensure that the Technical Committee has mechanisms for receiving inputs from relevant consumer and societal organizations. As a member body of ISO TC 229, the CASD Task Group respectfully request that you complete the following survey and return to Shaun Clancy, Knut Aune, and Aini Mat Said by September 30, 2011.

Recent publications have indicated both concerns and benefits among technically knowledgeable people about nanotechnology. Therefore the results of our survey are intended to help TC229 to better engage those who want to be involved in the responsible development and/or understanding of nanotechnology and standardization.

The survey results will be used to determine how the members of TC229 are engaged with some sectors of society and in particular with organizations representing the interest of consumers and civil society in the work of their member organization. It will be used to provide inputs to further refine the TC229 roadmap for future development of nanotechnology standards. It will also be used to provide recommendations on how consumer, environmental, and societal concerns and proposals from consumer and societal organizations can be integrated into the processes of developing nanotechnology standards by ISO TC229.

The survey results will not identify your member body's contributions and would be presented as a compilation from information received. Also, the survey should not be considered to be an evaluation of your member body. It is recognized that there are member bodies that do not have the resources to proactively engage potential participants or that, because of local needs, the consumer and societal dimensions of nanotechnology are not as immediately important as other topics being addressed by TC 229. If, however, the lack of engagement is because of barriers, real or perceived, this survey may help identify opportunities for member bodies to receive assistance in removing barriers and improve participation by consumer and societal group. The compiled results of this survey will be reported to the technical committee and used to identify best practices for members of TC229. This will allow members of the Technical Committee to better engage with society at large and in particular with organizations representing the interest of consumers and civil society in the work of their member organization.

- A. This section relates to your National TC229 Member Body (NMB) involvement with consumer, environmental, labor and societal organizations regarding ISO TC229 activities.
- 1. Please list the names of consumer, environmental, labor and societal organizations and their representatives that are presently involved in your National TC229 Member Body activities on nanotechnology.

İ	 	 	
ii	 	 	
iii.			
iv.			
V.		 	

2. Please indicate how consumer, environmental, labor and societal organizations mentioned above as a whole participate with your National TC229 Member Body.

Nature of Involvement	Level of Involvement			
	Very Often	Sometimes	Rarely	Never
Attending NMB meetings				
Having opportunities to have an impact on the standards making processes (e.g. making comments)				
Having opportunities to propose topics or new work items within your NMB				
Have made proposals for NWIPs and/or topics for study for your NMB?				
Other types of involvement, if any.				

 Please describe other types of involvement (if any) of the above organizations in standards making efforts within your National TC229 Member Body.

- B. This part relates to efforts your National TC229 Member Body (NMB) has undertaken to engage consumer, environmental, labor and societal organizations in your activities.
- 4. Number of consumer, environmental, and societal organizations your National TC229 Member Body has contacted and invited to participate in your activities.

Number of organizations invited:	
How often are invitations made?	

5. Has your National TC229 Member Body organized workshops to engage these organizations to participate in standardization efforts?

Yes
No

6. Has your National TC229 Member Body made any efforts to establish liaisons with consumer, environmental, and societal organizations in your activities?

Yes
No

7. Please describe if your National TC229 Member Body has established other practices to facilitate participation by consumer, environmental and societal organizations.

C. Barriers to consumer, environmental, labor and societal organizations participating in your National TC229 Member Body activities.

8. To what extent do you agree or disagree with each of the statements below with regards to barriers for their participation in your National TC229 Member Body activities?	Strongly Agree	Agree	Disagree	Strongly Disagree
Economic				
a) Cost of membership fee				
b) Expenses incurred (e.g. travelling)				
Awareness about standardization & TC229				
a) Lack of availability of information				
b) Limited accessibility to information				
Lack of technical understanding of nanotechnologies				
Resources				
a) Lack of personnel				
b) Lack of time				
c) Don't know				
d) Others, please state:				

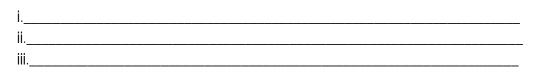
9. List the efforts that have been undertaken by your National TC229 Member Body to address the above barriers

İ		
ii.		
iii.		

 How would you rate the level of success of those efforts undertaken above by your National TC229 Member Body

Very good
Good
Fair
Poor

11. List the efforts that have been undertaken by the consumer, environmental, labor and societal organizations to overcome those barriers.



12. How would you rate the level of success of those efforts undertaken above by the consumer, environmental, labor and societal organizations to overcome those barriers.



13. How would you rate the level of success of those efforts undertaken above by the consumer, environmental, labor and societal organizations?

Very Good
Good
Fair
Poor

14. In your opinion, what is the level of importance of nanotechnologies:

		Low	Moderate	High
a)	To the consumer, environmental, labor and societal Organizations you have contacted			
b)	To your country in general			

Thank You!