

Report of “Expert Consultation on Ethics of Energy Technologies and Social Sciences in Asia and the Pacific”

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Summary

On the 25 August 2009 in Bangkok 50 persons from 20 countries sat down to review the program of work and draft reports in the Expert Consultation on Ethics of Energy Technologies and Social Sciences in Asia and the Pacific. The meeting revealed that few social science academies have conducted detailed work on environmental issues, and a number of members of the Asian Association of Social Science Research Councils (AASREC) called for further attention to these issues in their nations. They also agreed to contribute more time to the UNESCO Bangkok program on Ethics of Energy Technologies in Asia and the Pacific (EETAP).

The meeting started with an Orientation and Discussion of Environmental Ethics, with updates on the EETAP Project, by Dr. Darryl Macer, UNESCO Bangkok, and comments by the assembled social scientists, journalists, engineers and philosophers. The participants systematically went through 8 draft reports,¹ as well as considering the broad ethical framework for the project and for assessment of environmental ethics. There was discussion of further report outlines, and discussion of the current gaps in the EETAP project and for work on future collaborations across the region, from Iran to Japan, and Mongolia to Australia.

Participants considered that generally the Draft Reports tabled were well balanced and provided updated science. In particular the reports on “Universalism and environmental values”, “Energy flow, environment, and ethical implications of meat production”, “Water ethics and water resource management”, and “The Ethics of Farming Algae as a Biofuel Feedstock” were near completion. Further preliminary reports on “Representation and who decides”, “Community engagement”, “Ethical frameworks for research agendas and policy”, and “Nuclear Dialogues”, require more case studies from different cultures and communities.

Draft outlines for the reports on “Ethical worldviews of nature”, “Visions and hopes of the future”, “Energy equity and human security”, “Educational frameworks for environmental ethics”, “Gender, Environment and Energy Technologies”, and further case studies on the Adoption and development of energy technologies, were updated and renewed calls for contributions were made.

The feedback from social scientists was important, as it provided some new angles and analytical frameworks, to the previous reviews, which had often brought philosophers and ethicists together with natural scientists and engineers. This meeting gave a chance for more

¹ (The working drafts are available on <http://www.unescobkk.org/rushsap/energyethics/>)

sociologists, anthropologists and others to reflect on the issues. Specific questions are also available on the website.

Meeting Report

In his opening review, Dr. Darryl Macer introduced the EETAP project,² and that it is not intended to duplicate the numerous reports and meetings being held in the UN and other forums on energy and environment, but to open up ethical and value questions together with evidence-based science.³ Importantly the work can complement the considerations of the ethics of climate change, and development of better policy relating to the environment in general.

The participants introduced themselves, including:

Ms. Lindsay McGraw (Canada): Co-chair of EETAP working group 9, and author of the case study on the ethics of algal fuel.

Mr. John Weckert, Ph.D. (Australia): Professor at CAPE based at Charles Stuart University; has been working on the ethical frameworks for research agendas and policy, and has attended previous EETAP conferences. Broad interest in philosophy in general.

Ms. Fern Beavis (Australia): Based in the Academy of the Social Sciences in Australia, currently enrolled as a PhD student in geochemistry, with water as a strong interest.

Ms. Virginia A. Miralao, Ph.D. (Philippines): Secretary of the Philippine Social Science Council.

Mr. John Beaton, Ph.D. (Australia): From the Academy of the Social Sciences in Australia (ASSA), and secretary of AASREC.

Mr. Seyed Hossein, Serajzadeh (Iran): University professor in Tehran, Iran; and President of the Iranian Sociological Association.

Ms. Shirin Ahmad-Nia, Ph.D. (Iran): Medical sociologist and university faculty in Iran, and Member of Board of Directors of the Iranian Sociological Association.

Mr. Abdur Rahim Khan, Ph.D. (Bangladesh): Secretary of the Bangladesh Social Science Research Council. Also actively involved in the RUSHSAP programmes for the establishment of the Bangladesh Bioethics Association.

Mr. Salil Sen, Ph.D (Thailand): Based in Bangkok, doing research on sustainability.

Mr. Tai Chen-Hsuan (China): Master's student at Tsing Hua University in Taiwan.

Ms. Sarinya Sophia, Ph.D: National Programme Officer in UNESCO Bangkok.

Ms. Chutatip Umavijani, Ph.D. (Thailand): University faculty at Thammasat University, Liberal Arts Department.

Mr. Colum Graham (Australia): Currently an intern at UNESCO Bangkok, involved in writing a case study for Working Group 4.

Mr. S. Mokkapati, Ph.D (India): Scientist at the Indian Council of Medical Research, New Delhi, working on convergent technologies, and nanotechnology in India.

² For specific information and offers of help on the ongoing reports please examine the regularly updated working group webpages which list the members, outlines, guideline frameworks and draft reports: <http://www.unescobkk.org/rushsap/energyethics/>, and contact

Dr. Darryl Macer, Regional Advisor in Social and Human Sciences in Asia and the Pacific, Regional Unit in Social and Human Sciences in Asia and the Pacific (RUSHSAP) at UNESCO Bangkok; Email rushsap@unescobkk.org.

³ The report development can be followed through the individual working group websites, which include meeting reports and draft outlines of the reports. There is a yahoo group which is used to share information among the 200 plus current members of the project, unesco_eet@yahoo.com

Ms. Claire Alice Parfondry (France): Currently an Intern at UNESCO Bangkok, involved in writing a case study for Working Group 4.

Ms. Zahra Ibrahim Qureshi (Pakistan): Currently an Intern at UNESCO Bangkok, writing a draft for EETAP WG15 on gender and the environment.

Mr. Nauman Aqil Khan (Pakistan): Currently an Intern at UNESCO Bangkok, working on social development.

Ms. Worawarit Kobsiriphat, Ph.D. (Thailand): Scientist at the National Metal and Materials Technology Center (MTEC) in Thailand, with background in science and engineering, interested in Working Group 9.

Ms. Sumittra Charojrochkul, Ph.D. (Thailand): Co-chair of EETAP WG9, a scientist at the National Metal and Materials Technology Center (MTEC), in the laboratory of electrochemical laboratory working on fuel cells.

Mr. Tim Rackett, Ph.D. (Thailand): Originally from England, but has lived many years in Thailand. Faculty at Kon Kaen University where he studies Buddhist communities, animal rights, rights of nature, and how we make nature in our own image.

Mr. Ramil Tenorio (Australia): From Sydney working on human rights.

Ms. Lea Ivy O. Manzanero (Philippines): Member of Working Group 13, co-author of the WG13 report.

Mr. Lee Yok Fee, Ph.D. (Malaysia): Executive Member of the Malaysian Social Science Foundation.

Mr. Mohd Hazim Shah B Hj Abdul Murad (Malaysia): Professor in Science and Technology Studies in University of Malaya, and representative of the Malaysian Social Science Association.

Mr. Shin-Kun Peng (China): Interest in research and policy on regional economy and trade, working in Academia Sinica, Taiwan.

Mr. Shu-min Huang (China): Anthropologist, Director of Institute of Ethnology in Academia Sinica, Taiwan. He reflected on the flood damage to indigenous communities in the hills and the linkages to the issues of global warming, and how best to utilize the current knowledge.

Mr. Yung-Mau Chao (China): Faculty in the social economy department in Academia Sinica, Taiwan.

Ms. Celia Helen Thoreim (Norway): Co-author of the EETAP Working Group 1 report, and working for RUSHSAP to develop an ethical framework for the project.

Ms. Raine Boonlong (Singapore): Chair of EETAP Working Group 4, and author of the report.

Mr. Amarbayasgalan Dorjderem (Mongolia): Programme assistant in RUSHSAP and manages the EETAP website and member lists.

Mr. Rameez Ahmed Sheikh (Pakistan): Interested in peace education, and currently an intern at RUSHSAP.

Ms. Anna Shimpo (Japan): Currently an Intern at UNESCO Bangkok, interested in policy related to discrimination of persons with HIV.

Mr. Arthur Wolf (Netherlands): Working for RUSHSAP on mapping and analysis of the teaching of philosophy in Asia and the Pacific.

Mr. Dipankar Saha (India): Agricultural scientist in India, also working on a PhD in bioethics.

There were some general questions on the EETAP.⁴ Participants appreciated the amount of activities involved in the 15 working groups. Dr. Macer requested the experts to identify

⁴ Participants had copies of all reports and outlines as background.

critical elements that seem to be inconsistent, and to give critical feedback. EETAP was also open to suggestions on new topics, ideas for linkages, and what is happening in each person's institutions and opportunities that may exist for cooperation (The specific review questions are in the background document for the meeting, an appendix to this report). Further written comments were also welcome.

Discussion of WG1 Universalism and Ethical Values for the Environment

Darryl Macer: There are four main contributors to the report, and in particular Jasdev Rai and Celia Thornheim. If we look at the contents, the report addresses whether there are any universal environmental values? There are several approaches to the environment, and the first approach to the environment is apathy- not caring about it. Second is apocalyptic. Third is symbiotic. The fourth is integrationalist - that human beings are an integral part of the cosmos but not the essential part. The analysis of the ethical principles in UN texts starts with the Universal Declaration of Human Rights (UDHR) and the United Nations Charter. In 1945, the Charter talked about 'peoples of the world'. But by 1948, it became more individual centred in 'human rights'. The report is questioning the way to solve the environmental crisis. Then it looks at the ethical principles in conventions such as the Rio Declaration, UNFCCC. When we discuss treaties such as in the current Copenhagen process, if we come from a universalist approach, we will argue it a certain way but the report suggests if we set the similar goals even if our values are not the same, peoples can agree.

John Beaton (Australia): There is an important methodological issue that it is not just the social science or humanities community that will provide the solution, nor righteousness found in policy-making itself, or nor community involvement alone. We have launched into a multidisciplinary, cross-sectorial research across all disciplines. Issues of this size are best dealt with by multiple dedicated disciplines (multi-disciplinary), and sectorial contributions, where natural scientists are happy to work with social scientists. Understanding which disciplines contribute effectively is a starting point, and we like to think for the next generation of trying to understand the problems.

Darryl Macer: Agreed with the importance of having multi-disciplinary groups to solve the problems. In this meeting we have multiple disciplines, although only 4 engineers. In Australia, is work on the environment done in a multi-disciplinary way?

John Beaton (Australia): The National Academy Forum is an association, and network of the four learned academies. It brings 4 academies together: science, technological science, humanities and social sciences. The 4 academies come together when the problem is greater. One current subject is the nuclear debate. This problem will take 2 to 3 years just to provide a statement from the academies. It will also address ethical dilemmas and public opinion. This is perhaps one of the most challenging dilemmas. Democracy is not based on people choosing what is right, but what people want to do. The dilemma may be resolved by educating the public about what nuclear energy has to offer and what its risks are. The process will not be quick, but will be based on public education. The Forum will submit a paper to government to consider, in order to resolve in the public's mind what Australia wishes to do about nuclear energy.

John Weckert (Australia): I agree with what John (Beaton) was saying about multi-disciplinary. On universalism, one of the things that is missing in the current draft is the ethics of care, and it might be worthwhile putting emphasis on that in relation to future generations and our obligations to them.

Shu-min Huang (China): For anthropologists, we always use the term 'cultural relativism'. Over the past 2 decades, many anthropologists are shifting their positions to global challenges and many are willing to look at universal ethics. What are the things that transcend individual cultures, how to develop more international standards? The reality is

beyond social confines. The question is whether we can discover or uphold some of the more universally applicable standards. We are seeing more and more anthropologists looking at these universal issues.

Salil Sen (Thailand): Education can have a tremendous impact on energy. These are new paradigms altogether. My question is should education include being educated about emerging lifestyles. For example, should people work at home to save transport energy?

Darryl Macer: We need to do an assessment. If the protection of life is the ultimate ethical principle, a quarantine measure to combat flu will become a high priority. Its consequences on energy (i.e. more home energy consumption) can be assessed, but that's why we may try to prioritise. In policy-making, we need to prioritise. As our colleague from Taiwan was saying, universalism may be a 'dirty' word at times. What values are useful for public policy making? We need policies within communities, whether these communities are states, or sub-states. So it does make us think about our priorities. We will always have different interpretations. This report is looking at whether we have common goals or common principles.

John Beaton (Australia): I would like to address what Professor Shu-min Huang had to say- that anthropologists have different perceptions of what relativism or universalism is. There is something important worth mentioning- that cultures that we belong to as individuals, that must be respected, that are long-standing, that mark people's ethnicity- are not fixed in anyway. Dynamism is rapidly increasing. While each culture is individually malleable and subject to change under its own organic substances, it's the same for the universal world. Current there are very few universal principles about ethics from an anthropological view. For example, from a universal view, it is unethical to eat our own children, or other people's children. This is almost where we stop having our uniformity. The question "do we eat the children of our pets?" is very cloudy. If we think about world cultures revolving, there is hope that we will agree on universal principles of ethics. We do not have to think that cultures will always behave in the same way, and reject the values they will probably revolve. There is actual hope that we will agree upon higher principles of ethics. Cultures will often change their behaviour.

Overall Ethical Framework

Celia Thorheim (Norway): What we have created in the figure (see appendix) is an overarching framework that information from all the working group reports has fed into. The figure tries to organise them into a way that makes sense. First of all, we collected some of these principles from working groups and from the Universal Declaration of Human Rights and Universal Declaration on Bioethics and Human Rights. We analysed them, how different world-views interpreted these principles and use them. How these principles relate to one another. It would be possible to identify some core principles.

Bioethics has identified four core principles so perhaps environmental ethics can also do this. In the figure, the first suggestion is to organise them into how basic or fundamental they are. Underneath are some principles that relate very closely. From top down, it would be how basic they are. From left to right, there could be more individual to collective values. Towards the bottom right corner, are clusters of anthropocentric principles. After some more analysis it will become clear what properties these individual values have. We welcome suggestions on what principles to include?

Tim Rackett (Thailand): There is a bit of contradiction between the right of development- how about the right not to be developed? This could include a right not to be developed economically in a neo-liberal economy, and a right not to be governed in a particular way. Because governments often use development as governance development.

Shu-min Huang (China): What level are we talking about? Are we talking about individual autonomy or autonomy of the state? All these basic categories tend to restrict our individual abilities to think beyond our framework. This is an issue that social scientists have to tease out.

Darryl Macer: Autonomy can be applied to individuals and states. Principles on the right hand side are usually applied to states or communities. There will also be relationships between principles. We agree that there is a right to consent – to development and a right not to be developed. A better term would be ‘the right to a choice to development’.

Yung-Mao Chao (China): I suggest more public interest, and less individualism.

Dipankar Saha (India): Instead of consent, have informed consent.

Salil Sen (Thailand): The figure could show regional variation. If you could add a vector to each of these points, the trends could be shown. For example, if you have sustainability, what is the direction of its movement in the region. The movement in USA will be different to its movement in Africa. The priority of each of the region with respect to these attributes could be indicated.

Darryl Macer: The word ‘prior’ can be added to ‘informed consent’. It will be difficult to generalise for the region as each country has different policy.

Chutatip Umavijani (Thailand): In the figure there could be an index from up and down, what is the difference? From right to left, what is the difference?

Celia Thorheim (Norway): We would really like to decide what to name the axes. We are open to suggestions.

Virginia A. Miralao (Philippines): I would like to mention the UN Human Development Report. In their definition it is really broadening the choices of the individuals - to improve life choices.

Chutatip Umavijani (Thailand): About the universal good life, how can we define that? Who is it for? And how to get there?

Shirin Ahmad-Nia (Iran): We need to add tolerance. Tolerance is important in globalism.

Sarinya Sophia (UNESCO): When we talk about harmony and peace, and we need to add understanding others and self-respect. It should not be just a top and bottom, there should be a flow and network. We should not say the top ones are important, and the bottom ones are not. They are all important.

Shu-min Huang (China): Instead of tolerance, perhaps a better way to put it is to respect differences. Develop sensitivity to difference.

Seyed Hossein Serajzadeh (Iran): We could consider these values in different cultural contexts. In different contexts, these words have different meanings. Some people do not agree with dichotomies.

Shin-kun Peng (China): For economists, it’s not just justice and equality. More important is efficiency. When we consider energy resources and utilisation, we cannot leave out the efficiency.

Abdur Rahim Khan (Bangladesh): Three connotations are missing. First, when we talk about peace, then we have to talk about happiness. Another one is integrity. And another right to participation.

John Beaton (Australia): Am I correct in understanding that on a horizontal axis, we move from individual to general (from left to right), and these are interactive and a system of behaviour? When I look at cooperation on the right side, it speaks to me about cooperation about society and political structure. And on the left hand side, there would be an equivalent cooperation between families. Are we not missing out on having a box there called “competition”, as economists may say. Genes and phylogenies compete. To understand the role of competition, and how we can embrace it without making it our enemy is a major challenge, which fits into everything on board.

Sarinya Sophia: Instead of competition, we might have ‘mutual cooperation’.

John Weckert (Australia): I know there is cynicism on defining what is a good life, but if we take the approach of looking at us as the sort of creatures that we are, and we can say some things about what applies to us. I do not think we should be too cynical about this notion, and start seeing things in context in that way.

Shin-kun Peng (China): I haven’t ignored competition. I think efficiency is the result of the competition.

Hazim Shah (Malaysia): The cluster of user-pays, polluter-pays, relate to environmental ethics, whereas other principles are more general principles governing everything else. Animal ethics is not included.

Amarbayasgalan Dorjderem (Mongolia): Regarding competition, I wonder if ‘benefit-sharing’ would be more relevant. Also on efficiency, how about ‘wise-use of natural resources’. Beneficial use instead of efficient use.

Dipankar Saha (India): Instead of access to resources, benefit-sharing would be more relevant.

Salil Sen (Thailand): It is a complex task, recollecting an analogy. A magnet will gather all the particles. If we can identify 4 magnets here, economics, ethics, empathy, ecology, and see how they are attracted to each other. Each magnet will have other fields.

Darryl Macer: One of the points we have been discussing, is should we only include good/ideal ethical principles? (in relation to ‘competition’). In the same way, are these only desirable principles, or is it better to have also behavioural principles. Abuse of any one of these principles can also be negative. Another work that could be gathered is trying to look at the behaviours that need to be overcome in order to solve our crisis.

Hazim Shah (Malaysia): I think there is a distinction between descriptive and normative elements. And what you could try to include here is also the descriptive.

Chutatip Umavijani (Thailand): The more important thing is what do we plan to do with these two concepts? If you want something ideal for a person to follow, you need to have something good. We already know what human nature is. We should look at the result of the graph that we are trying to do.

Yung-Mao Chao (China): Protection of the environment needs to be added as a basic concept.

Worawarit Kobsiriphat (Thailand): You need to know what your own role is, and act according to your role in society.

Representation and who decides

Raine Boonlong (Singapore): Presented a power-point to summarise the working group 4 report and future directions. The report examines the rights of nation states to decide on energy technologies for their people, when these decisions may bring about an environmental or security risk to their countries or to other countries. It also looks at the rights of local communities and ethnic groups with regard energy infrastructure in their area.

The main principles developed are that of state sovereignty (A nation state has a right to regulate affairs within its territory without intervention from other nation states), the limits to principle of state sovereignty (Nation states have responsibility to ensure that their activities do not result in harm to people or damage to the environment); and the Precautionary principle (Requires nation states to undertake measures to avoid activities that may cause harm to its population or to its environment.). Currently the case study are from Mae Moh coal-fired power plant, and Map Ta Phut Industrial Estate in Thailand. The report examines the government’s consistency with domestic and international guidelines, and concludes that the rights and representation of local communities was inadequate.

Further case studies under development include on the Olympic Dam mine, South Australia (Expansion of mine leading to adverse impacts on the environment and Aboriginal communities); the Palm oil sector, Sarawak (Malaysia) (How development of palm oil sector affects the Penan and Iban tribes; and claims of a lack of consideration of indigenous tribes in decision-making); and the Lancang-Mekong hydroelectric cascade, Yunan (China) (Development of local participatory process in decision-making, and how state relations affects decision-making process in relation to shared rivers).

Shu-min Huang (China): The third new case study is also associated with working group 14. How do these two groups interface?

Darryl Macer: Working group 14 has some information on dams, but we do not want to replicate the information on dams. Also WG5 has an extensive case study on dams. We will develop a matrix of case studies to show the relations amongst the working groups.

Shin-kun Peng (China): I would estimate that currently in Taiwan, the government officials would have about 20% of the representation in the decision-making voice, 30% would be academic, and citizens about 20%-25%.

Salil Sen (Thailand): The core issue is who decides. Millions of people may be relocated. The media should discuss what is happening to those suffering. What is the role of the media in this?

Marwaan Macan-Markar (Thailand): As a journalist I would say that there is a lot of debate on dams in the media. High expectations are placed on the media.

Abdur Rahim Khan (Bangladesh): Do we have principles or criteria? In Bangladesh we try to develop energy, but multinational companies are gorging the issues. You should examine the role of multinational corporations in displacing people.

Darryl Macer: It has been suggested that we include a report on multinational companies. We need volunteers to include case studies. We can place this issue on the table.

Virginia A. Miralao (Philippines): The importance of the role of foreign investment in powerplants and the energy sector is critical, and especially where the energy sector has been privatised. The Philippines is an example, also a case that would highlight the privatisation of the power plants.

Salil Sen (Thailand): A forum called Greenchip in the U.S.A. has looked at some related issues.

Sumittra Charojrochkul (Thailand): In relation to the Mae Moh power plant that used lignite coal, there has been another attempt to build a plant in South Thailand, using clean coal. But it was still met with protests. The issue was that they were going to build it on a beautiful beach. Other issues are who is the owner of the coal? Who will companies buy it from? Also we had some recent problems with energy supply, there was a flood in Srinakarin dam and there was not enough time to move people. Natural gas is being supplied to Thailand from Myanmar. There have been suggestions to build another coal fired gas plant to substitute importing energy from other countries.

Sarinya Sophia (UNESCO): UNESCO organized peace meetings with youth and they shared their ideas, in Yunan. The students said that the government wants to build more dams because they want more power not because they need more energy. Through these meetings we could develop youth to participate in development.

Raine Boonlong (Singapore): We need a few more case studies, and more information on the rights of nation states.

Shirin Ahmad-Nia (Iran): There was a problem discussed in Iran, people were going to construct a dam next to an ancient cultural heritage site. It could be a case study?

Yung-Mao Chao (China): In terms of representation, should also include shareholders and community leaders in addition to villagers. Need to emphasise good governance.

Community engagement

Darryl Macer introduced the report.

Tim Rackett (Thailand): A Thai example that could be useful is a Buddhist community called Santi Asoke. It has been around quite a long time and is a good local example.

Shu-min Huang (China): This study focuses on two issues, community engagement and modernity. Exactly what type of trajectory are we dealing with? WG5 report is a very theoretical report.

Abdur Rahim Khan (Bangladesh): The role of the state in the civil society in engaging community and development could be also developed.

Energy flow, environment, and ethical implications of meat production

Lea Ivy O. Manzanero (Philippines) gave a presentation on WG13, referring to the executive summary and report. For many countries, industrial production of animals is the common system. What the report shows is that prices of meat are determined by the price of oil. The report calls for policy to include the real cost into the system. There are some recommendations already. Also, investment instruments could be used to alter the type of development. In the report there are comparisons of the efficiency of energy conversion from maize to protein in different animals. The sorts of policy and instruments that could be developed are interesting for this. There was a lot of difficulty in the lack of transparency to gather the real data because the costs are hidden. Some governments have these figures, but are not opening them up.

Shu-min Huang (China): In calculating the cost, would waste that animals create be part of the concern?

Lea Ivy O. Manzanero (Philippines): We hope to obtain accurate data. Most of the factories directly dump their waste into the rivers, and this cannot be calculated. So far the existing laws in the Philippines are not sufficient to counter that.

Salil Sen (Thailand): If we change food habits, do you agree that it would not only be good for the environment, but also good for health? If I am oriented through advertising to change food habits- is that part of your analysis?

Lea Ivy O. Manzanero (Philippines): So far not much research has been done in the Philippines. There is still an increasing demand for meat. Through education, people will have more choices in the way people conduct their lifestyles.

Shu-min Huang (China): We should examine energy conversion processes.

Shirin Ahmad-Nia (Iran): I observe the same experience in Iran, the more people become rich, the more they would like to show off by serving red meat.

Worawarit Kobsiriphat (Thailand): Within the category of meat- you also have chicken that doesn't look like chicken anymore (e.g. Chicken Nuggets) which would require more energy to make.

John Beaton (Australia): We need to examine the instruments of regulatory systems to manage health and welfare, and recognising that it is demand driven. People would often elect to eat something like red meat to demonstrate status. I see no explicit single instrument to resolve this, but I suggest to reduce human population and stabilise. Clearly some countries do this. Is there a footnote or recognition that reducing population might be effective?

Lea Ivy O. Manzanero (Philippines): I did mention the increasing population is an issue, but Philippines is a Catholic country so it is not easily accepted.

Abdur Rahim Khan (Bangladesh): The issues of religion should be raised. The role of religion - the way of slaughtering the meat - should also be highlighted here. The way of slaughtering and care is important.

Lee Yok Fee (Malaysia): We have to consider the definition of a healthy food. In Malaysia, how people define good and healthy food is often referring to organic food, or beans to replace protein from meat.

Yung-Mao Chao (China): Traditions are important. In terms of decision-making processes, the first one is traditionalist. We have to develop environmental policies further.

Virginia A. Miralao (Philippines): Does your paper include figures of per capita consumption of meat in the region? It seems like Thai food is more meaty than Filipino.

Lea Ivy O. Manzanero (Philippines): There is some information on per capita consumption across the region.

Darryl Macer: There is a detailed table across the world in the report. Population increase will also increase meat consumption.

Salil Sen (India): To process 1 kg of chicken requires 22 litres of water. To process 1 kg of beans requires 1 litre of water. What is the role of genetically modified food here? Does the report include the issues of cloned beef or pork?

Darryl Macer: In this report there is not a discussion of GM animals. Perhaps you could clone a very efficient animal (in terms of energy), but the main issue here is the system of meat production. We didn't want to get caught up in the GM food debate but to focus on energy.

Nuclear Dialogues

Darryl Macer introduced the background and report from working group 12 on ethics of nuclear technologies.

Shu-min Huang (China): Taiwan is constructing its fourth nuclear reactor. By the year 2015, France will be helping to construct up to 200 nuclear power plants across the world.

Salil Sen (Thailand): How to handle the waste?

Darryl Macer: Smaller nuclear reactors are considered very low-risk in operation, but they still have a waste issue. Many of the proposed projects are in countries which do not have good safety records in other areas. We also have people saying that small-scale energy production means we do not need nuclear.

Salil Sen (Thailand): Is this monitored properly by the UN as an ethical issue?

Darryl Macer: It has become a political issue, and many people mention that the Nuclear Non-Proliferation Treaty should be re-discussed. We try to separate the issues from the military issue in this report.

Shu-min Huang (China): When we look at policy issues, it seems that the criteria or the ethical concerns seem to be shifting as we move from time to time. Nuclear energy has become a dirty word. When global warming became a concern, then nuclear energy comes back. Birth control in China in 1970s and 80s was not well received, but now it's considered as useful by many. Under different circumstances, these terms have different meanings. The dietary standards used by food and agriculture (USDA) has also changed. If you look at the criteria adopted by USDA or FAO, they change constantly also.

John Beaton (Australia): It strikes me that there is an element about the nuclear debate that overlaps very strongly with security. Security refers to security in the broad ethical sense, that people need to be secure that their bank account stays where they are, and if we have major infrastructure investment such as freezers, we need essential services including energy. If one of those ways of feeding a grid would require the use of nuclear energy as a part of a package i.e. solar, wind, wave- then the ethical question is not about whether nuclear itself is any good or not, but in what way can it contribute to human security in that sense.

Ethical frameworks for research agendas and policy

Darryl Macer: In working group 10, we are trying to see how we can develop more ethical policies. One of the points of this report is that energy policies in many countries are

determined for economic nature and not because of ethical issues. It's the same for representation- often it is for financial control. There are funds for some types of energy i.e. nuclear, but not other forms of energy. The system, such a sgrid, also needs longterm policy to maintain. If you visited Karachi in Pakistan, almost nobody relies on the grid anymore. The distribution of energy system has let them down. Hospitals there do not use the grid anymore because they have expensive and delicate machinery that needs a stable electricity supply so generators are used for stable energy.

Shu-min Huang (China): How do you deal when the ethical concern conflicts with environmental concern? They may be competing demands, and both cannot exist peacefully. In other words, when you go for one, you sacrifice the other. Let me give you an example. I'm doing research on 3 rivers in China running parallel for 1000 km. The government in China is planning to build dams that generate more than 50,000 megawatts per year. From one perspective, you may say if this is clean energy and it's renewable, then it creates wealth. On the negative side, it involves forced resettlement among the indigenous people, elimination of biodiversity, and creates potentially hazardous environmental impacts. When you put all these minuses and pluses on the table, then it's almost a dead end. So where is the ethical standard? This becomes a critical issue.

Darryl Macer: In terms of policy by central government, the report suggests that we need to have an ethical policy. Perhaps we should try to create a matrix to calculate ethical costs. Has any government tried to do this, or successfully done it? Many of the ministries in the Asia-Pacific would rather have policy options than recommendations from this project. They do not like to be told by the UN (and Western nations) what to do. Is there any experience you have or suggestion on that?

Sarina Sophia: When we want to build the dam, many local people don't accept it. The government can hold a poll, and the majority wins. There will be statistics to show benefit for both sides. However, the person(s) who you choose for the polling will affect the decision i.e. if you choose a displaced person.

Tim Rackett (Thailand): Fish could not go up the river to spawn with many dams. In a Buddhist view animals are sentient. Animal rights need to be included.

John Weckert (Australia): This is going back to the point of ethical conflict. If there was only one side to it, we wouldn't bother sitting in here talking about it. One interesting point raised by German philosopher Habermas was that one of the problems he saw in the way Western society had developed was that it only took into account efficiency and profitability.

Salil Sen (Thailand): On a conceptual level, on the framework- who is responsible for the waste? When the refrigerator has served its life, who is responsible for the waste generated. With today's climate, floods are too common nowadays, and dams are related to this.

Colum Graham (Australia): All of these ethical issues were discussed in the framework for dams by the World Commission on Dams. What happens when dams are decommissioned, especially in relation to the 3 parallel rivers in Yunan- comes down to how transparency is discussed.

Amarbayasgalan Dorjderem (Mongolia): One of the challenging issues with big development projects is that when they conduct a feasibility study- the document is not open to public and even to civil servants. They just hide behind the mask of commercial interest. If the government wants to have a dam or nuclear dam, they probably will refer to France or Japan. There are economic interests for government. Environmental impact assessment, precautionary principle- these principles are more operational than rather used at the beginning of these projects.

Darryl Macer: There is a call for transparency of studies. Life cycle design can be included as one of the policies.

Lindsay McGraw (Canada): Although we could think an ethical matrix to determine the best choice is useful, it often falls more into an economic realm, and costs.

Yung-Mao Chao (China): Policy assessment is important. It is sometimes difficult for governments for local people to have choice.

Darryl Macer: Policy assessment tools needs to be developed.

Shu-min Huang (China): Anthropologists have been accused of being romantic- that grassroots people are powerless, illiterate and so on. Some of the dam sites I visited in China don't seem to support that view. When they start building a dam, the government typically draws a red line around the area and starts compensating households. Very often, people who were inside the circled area would be fighting to raise the compensation. For those outside the circle, they want to be included in the circle so they can get any compensation. When we talk of community, who are we referring to? The community that would be resettled? The community involved in building the dam? Policy issues are always very complicated and regardless of the type of research we do, we always have difficulties in dealing with that.

John Beaton (Australia): I do not believe that governments are malevolent, but I would suggest that ethics is not at the forefront of their mind. If some decision would get them re-elected again, they would try to soften the blow on the community. Most governments are loath to damage their own populations, it is not in their interests. Given that, government really ought to be sensitive to populations' needs.

Water ethics and water resource management

Darryl Macer introduced the report on working group 14 on water ethics. One of the ethical issues facing many parts of Asia is depletion of underground water reserves. This is not renewable in the short term. There are many uses of water. Water for energy production is a small fraction of this, but in some instances it's a large fraction, especially when we are considering the possibility of biofuels. The World Commission of Dams has developed 5 core values. The report has 8 case studies, including discussion of the governance of water in China, and who is involved. Social scientists and engineers have worked on these diversion projects for many years.

Fern Beavis (Australia): The biggest issue of water in Australia is the lack of it. Pollution isn't really an issue. Salinity is another problem- we don't have volume at all.

Dipankar Saha (India): Inside India, they don't want to share the water with the neighbouring state. There was an idea to connect all the rivers in India, but it was decided not to because each state wanted to retain control and resources.

Darryl Macer: In Australia do you have state competition for water?

John Beaton (Australia): Yes. Water is now a commodity, not sure if it's a state or federal commodity. The question now is whether it is a private commodity or a public commodity? Should the provision of water be clearly marked as a security based public essential service-is there an individual right to get a drink of water? You don't have to eat everyday to live, but you do need to drink water everyday. There were politicians in Australia who wanted to turn rivers inland. The ethical issue is to what degree is water a public commodity. It may be OK to privatise, but not to lose absolute control.

Salil Sen (India): In India, we have a problem of groundwater pollution and arsenic poisoning. If somebody owns the land on top, does he also own the land below, so he can draw up any amount of water. Some situations of water extractions for the soft drink companies relate to this.

John Beaton (Australia): The issue of groundwater is heightened by radio dating of carbonates of water. Water that was pumped out of the ground to irrigate fields of lucern (food for racehorses) was found to be 20,000 years ago, meaning that the recharge time is probably a good deal longer than what people had imagined. It is not easily renewable.

Abdur Rahim Khan (Bangladesh): For countries of the SARC region, water is a multinational issue. The issue lies in the barrage dams in Bangladesh and India. There are some international conventions about the water use.

Darryl Macer: One of the members of working group 14 did his research in water sharing in Bangladesh. There are some international principles quoted in the report.

Sitaramaiah Mokkaapati (India): The sea level is rising, and water on land decreasing. From the atmosphere we can tap water, not from the ground. We need to consider the appropriate development of technology?

Dipankar Saha (India): Arsenic in ground water in India is important, and it depends on types of agricultural fertilizers. There is a very interesting concept that takes value in multiple systems.

Sumittra Charojrochkul (Thailand): Even 20 or 30 years ago in Bangkok, people didn't usually drink tap water, but drunk rain water. Nowadays no one can drink rain water because it is acidic. If we can still drink rain water or use it, we won't have that much water shortage.

Abdur Rahim Khan (Bangladesh): Agricultural production policy is directly linked to water. 1 kg of wheat uses 2 kg of water, 1 kg of rice uses 4 kg of water, 1 kg of vegetables uses half kg of water. You use less water producing vegetables than wheat. There is a need to change food habits.

John Weckert (Australia): Desalination is an important issue. Is there anything in this report about desalination because in South Australia, we do not have enough water.

Darryl Macer: In this report no, but in the case study of Olympic Dam in South Australia a desalination plant is discussed, that will be in WG4 report.

Case studies on the Adoption and Development of energy technologies

Sumittra Charojrochkul (Thailand): Working group 9 is on the state of the art in energy technology. We circulated questionnaires to collect opinions, and there are many engineers in the group. We have come to the preliminary case study. Lindsay has written the algae case study, which links to the use of biofuels instead gasoline or diesel. After this we will have a case study on biofuels, comparing the situation in India with Thailand. We think that it is ethical to have biofuels - ethical for farmers – a choice for them to have a better life. The case studies follow the same outline. First is historical development of the technology - energy products and use of the energy. Present concerns and future hopes for that technology. Constraints including land usage. Specific requirements of that technology. Any uncertainties or costs. Any private or public sector investment into that technology? If we need any extra technology, any policy incentive to push that technology should be available.

Lindsay McGraw (Canada): Algae are being raised as a saviour of our energy crisis. To date, there is no commercial producing energy from this and no one has made it economically viable. It's not a food crop, so it's not going to compete with our food sources. It can be grown in the desert or even in the ocean. The algae is very high yielding compared to other feedstock food crops such as corn, oil or canola per square unit area. Algae can be grown in salient (salt) water so we don't have to use our freshwater resources. The strategy will be to chose an algae strain that contains high oil content. You cultivate it and then you have to extract the algae. One problem is the de-watering- how to get rid of the water from the algae. You have to extract the oil, some of that can be used directly, or you can send it to a refinery and change the form. There needs to be improvements before the technology can be commercial. A big study in the 1970s was conducted in the U.S.A. In the U.S., they use 60 billion gallons of diesel from fossil fuel per year for transportation. Algae are the only sources that can displace the entire amount. The climate required for growth of algae has to be warm enough. Algae requires a specific salinity to grow. Nutrients are important. Phosphorus might be an issue because there is a limited supply of phosphorus. Other issues

such as evaporation and precipitation need to be controlled for optimal growth of algae. Algae are susceptible to invasive species. One interesting thing is that algae use CO₂ as an input - so this can be taken from power plant emissions and using this to channel algae growth. It could help with climate change emissions. Also you can grow algae in waste water.

Salil Sen (India): What is the scale or cost break now?

Lindsay McGraw (Canada): Actually now it's not scalable. A lot of it has not even left the laboratory. Now it doesn't break even in terms of costs.

The participants were invited to develop more case studies.

Visions and hopes of the future

Darryl Macer introduced the outline of Working Group (WG) 3. One of the key topics here is what sort of future do we have, and what hopes do we have? Do we have also a view of the future? Different governments have different planning cycles. The UN has different planning cycles.

Tim Rackett (Thailand): It is important to have imagination and have a vision for the future. American politics like to pre-empt the future. So the future is still open and undecided. We can act here and now, and make a difference.

Shu-min Huang (China): How much faith should we put in GMOs and biotechnology?

Darryl Macer: We don't consider GMOs at the moment. At the moment in the energy sector, GMOs are not used much, though probably in algae and for biofuels GMOs may be used. The UN position is positive.

Energy equity and human security

Although there have been several meetings on this group and a number of presentations, there is no report yet. When we try to look at legal approaches, we found over 20 laws would apply to this issue and a number of cases just in India. The issues are quite complex.

John Weckert (Australia): Equity issues have been discussed much in bioethics, particularly to do with medicine. Intellectual property rights are also important.

Darryl Macer (Canada): When Lindsay was talking about commercial aspects in the algal case study, there is some discussion about intellectual property rights.

Educational frameworks for environmental ethics

The outline was developed in Malaysia in June 2009. There is a difference between environmental education (describing biodiversity itself for example) and environmental ethics education (teaching that something should be preserved).

Salil Sen (India): Adult education and online options could be useful to add.

Darryl Macer: Are there any social science academies involved in environmental ethics education?

John Beaton (Australia): The Academy of Sciences in Australia have education programmes for primary and secondary schools. Academy fellows are often invited to take part in the curricula development, but I suspect that in environmental education, there is no distinction between environmental education and environmental ethics education, and that the ethics is embedded in environmental education.

Fern Beavis (Australia): I have been involved in teaching primary and secondary schools. The biggest message we are trying to get across is that you need to be environmentally responsible, show scientific methods and issues of concern. We let them make up their own minds as to how they can be environmentally responsible.

Darryl Macer: Has it worked?

John Beaton (Australia): This strikes me as crucial, and the single best opportunity to make future progress. A tremendous amount of pressure is put on mature citizens by their children, who instruct us to be this or that, for example to be vegetarian, who instruct on environmental ethics. The education system is having an impact. None of our workshops, committees or activities or any of the other public forum are currently involved.

Darryl Macer: UNESCO also has work in COMEST, its an expert advisory group. We have one working group on environmental ethics, and one started on environmental teaching.

Seyed Hossein Serajzadeh (Iran): The importance of education for children cannot be understated. My personal experience is that my children are aware of environmental issues because of what they have learnt from schools. Education in the early stages plays a crucial role. Other thing is that environmental ethics is a kind of ethics that most religions and traditions are very prone with although human rights may differ in different cultures, but environmental ethics is consistent. Children are very prone to this kind of education.

Salil Sen (Thailand): Schools take care of daytime education, what about UNESCO having a role in the extra-curricular time. Isn't there some responsibility in informal education.

Darryl Macer: I guess there are many opportunities if we make use of internet. In bioethics, UNESCO has developed a core curriculum, mainly focusing on biomedical programme. We are considering developing a core curriculum on environmental ethics education. We have to try to find ways to make it interesting for people to learn about the environment. If you are interested in this, our unit is working on philosophy teaching, so that's under construction. Any willing contributors to case studies or materials?

Gender, Environment and Energy Technologies

Zahra Ibrahim Qureshi read the outline of the gender and environment group and invited contributions.

John Beaton (Australia): I would think that it is important to consider stratification, not just across gender lines, but age lines as well. We have an aging world population, and we have children that need looking after. At some stage it may be necessary for a finer scale analysis.

Darryl Macer: AIT has conducted a study on rice intensification in Cambodia- older ladies stay on farming area and using new technologies for rice cultivation. Old men and young women move to cities. There is double stratification here.

Shirin Ahmad-Nia (Iran): In Iran, to clearly report the link between gender and something is not well tolerated. In Iran it is difficult to do research as the internet is filtered.

Abdur Rahim Khan (Bangladesh): Disaster management in Bangladesh has shown the feminisation of poverty. Women have got unique coping strategies. When a flood appears, women keep the food grains in polyurethane to protect and then take the grains out after the flood. In national disaster management policy a relation to gender has been clearly defined.

General Discussion

Darryl Macer: Any other issues that you think would be useful to include?

Colum Graham (Australia): We haven't really taken into consideration those who have not been converted? Perhaps the best way to discuss Promethean values would be to discuss business relations to the environment, for example we have seen interest in Australia and China business relations.

Shu-min Huang (China): Perhaps not just foreign investment, but multinational corporation's responsibility in environmental issues. If you think about these big companies that are clearing the forest in Indonesia, the scale is enormous. Really few people take up the charge against these multinational corporations.

Yung-Mao Chao (China): Maybe not just gender and environment problem, but cultural implications or social implications.

John Beaton (Australia): As a question of operational methodology, there is a distinction made in the literature that anthropocentric or human focused approaches contrast with ecocentric systems. Does anthropocentric have any kind of negative implication to anyone in the room? We care about forests because we like to be in them. We care about water quality on earth because we drink it. If there's water on Mars we wouldn't care about its quality. We care about it because we like it. Few care about it because of its 'intrinsic' value. If you want to get people to behave in a way, use their self-interest to get them to do the right thing. If self-interest is a key to helping humans care for the environment in an ethical way, this is one opportunity that is open to us.

Darryl Macer: In anthropocentrism, you can try to protect the environment for values that people construct. There is distinction that can be made between ecocentric viewpoints and anthropocentric views, which may include the elimination of the species for the environment. It is not one which our species would like to do. Our approach in the reports firstly is descriptive, to describe systems and how people value. In environmental protection, so far most successful models are national park models.

John Beaton (Australia): I am also concerned that some of our interest in preserving all forms of heritage, natural, physical and social sometimes extends to a kind of thinking that consigns people living some form of life to museum specimen. In Australia, there is a romantic view not shared by many indigenous people, that they are a lot better off when they are left alone. Much of our anthropocentric view has to take into account change and revolution of human societies.

Hazim Shah (Malaysia): One of the ideas and concerns of the environment and sustainability, is that the two should not be thought of separately. The problem is not so much to do with ethics or religious values, but because we have a common set of values more or less, yet we see a sort of a discrepancy between the ideals and the reality. I was reading an article from Turkey on the environment in OECD countries showing an increase in pollution according to indicators. The Muslim text says very nice things about nature, and God, and people. I'm not sure whether ethics education is the way to go given the reality of the situation. I'm not sure multinational corporations are to be blamed. Part of the problem lies with national governments who are involved in economic competition. Not all countries agree to be signatories to international agreements like Kyoto. Economic development has to be tackled. Ethics education alone will not work. One should pay attention also to national governments.

Virginia A. Miralao (Philippines): We have said very little about rapid urbanisation and environmental protection. Is there anything in your project based on cities and environment, and the urban poor groups in many of our cities?

Arthur Wolf (Netherlands): Sometimes we get too stuck in the dualistic nature. Regarding environmental ethics education, a few months ago I was talking to a scholar from the Pacific, Ron Crocombe, who unfortunately passed away. He mentioned that a company like Coca-cola is approaching schools to sell their product. In an age from where parents are working and children are at day-care centres, when we talk about ethics education, it's the whole concept of what it is going to school, and this is where I think national governments should play a role.

Amarbayasgalan Dorjderem (Mongolia): Beside the government, how about we also try to approach other groups of society- individuals, NGOs, to collaborate on this issue and to bring this message to all of us. Someone said that there is no single bullet to tackle environment issue. While being a member of working group 14, I found only one international document. On the other hand, this human rights approach, particularly the right to live in a healthy environment, could also be a strong tool to create environmental movement.

Shirin Ahmad-Nia (Iran): The point Arthur made about eating habits is also true in Iran. People are criticising working mothers for neglecting their children, and it is important to consider lifestyle changes.

Darryl Macer thanked all for participating and closed the meeting.

Appendix: Background Document for the Expert Consultation on Ethics of Energy Technologies and Social Sciences in Asia and the Pacific, 25 August 2009

Arnoma Hotel Bangkok, 99 Ratchadamri Road, Pathumwan, Bangkok
(Venue: Saracha Room, 3rd Floor, Arnoma Hotel Bangkok;
Tel. +66 (0) 2655 5555; Map: <http://www.arnoma.com/01location/index.htm>; Access by BTS)

1. Request of Participants for the Meeting

The goal of the Consultation is to discuss the social science aspects of environmental issues, and to review the Ethics of Energy Technologies in Asia and the Pacific (EETAP) project.⁵ There are a number of draft reports, and outlines of other reports, available on the website (see below). Participants are requested to read in detail particular reports and provide focused comments for critical peer review on a report(s) that they are most interested in. There is also a list of specific requests at the end of this document.

The program will be structured that after a general overview, the reports are discussed in the order in the programme, and then general discussion will occur on gaps in the EETAP project, and future opportunities for collaboration.

There will be some 5 minute focused presentations on particular issues and questions during the day. Participants are invited to discuss possible presentations that will enlighten all, with the secretariat beforehand (to Darryl Macer, Email: d.macer@unesco.org).

No registration fee is charged; We expect 40 participants from a number of countries. Prior registration by email is encouraged. Please indicate if you are content with an electronic copy of the reports, to save paper. The reports are on the website, and a copy of all materials, will be available for transfer to your computer upon registration.

2. Program in Brief

8:30 Registration

9:00-10:30: Session 1: Orientation and Discussion of Environmental Ethics

Introduction and Update on the EETAP Project, Meeting Goals

- Prof. Darryl Macer, UNESCO Bangkok

Self-introductions of participants

10:30-10:45 Morning tea

10:45-12:30: Session 2: Review of Documents of Working Groups 1, 12, 13, 14; Ethical Framework

Lunch (provided to all registered participants)

13:30-15:30 Session 3: Review of Documents of Working Groups 4, 5, 10; and Outlines of Other WGs

15:30-15:45 Afternoon tea

15:45-17:00 Session 4: Discussion of the current gaps in the EETAP project and Future Collaborations

⁵ Reports and Outlines from the working groups (WG) of the UNESCO Ethics of Energy Technologies in Asia and the Pacific (EETAP) project (available on <http://www.unescobkk.org/rushsap/energyethics/>) will be discussed. These papers will continue to be open to review over the coming months, and we seek comments from all levels on these documents.

3. List of Specific Meeting Documents (WG Drafts on

<http://www.unescobkk.org/rushsap/energyethics/>)

Draft Reports

1. Universalism and environmental values [version 4 of 19.08.2009]
4. Representation and who decides [partial report of 01.06.2009; Updates will be presented]
5. Community engagement [partial report version 3 of 01.08.2009]
10. Ethical frameworks for research agendas and policy [partial report version 3 of 04.08.2009]
12. Nuclear Dialogues [partial report version 2 of 19.08.2009]
13. Energy flow, environment, and ethical implications of meat production [version 4 of 22.07.2009]
14. Water ethics and water resource management [version 5 of 19.08.2009]

Draft Outlines

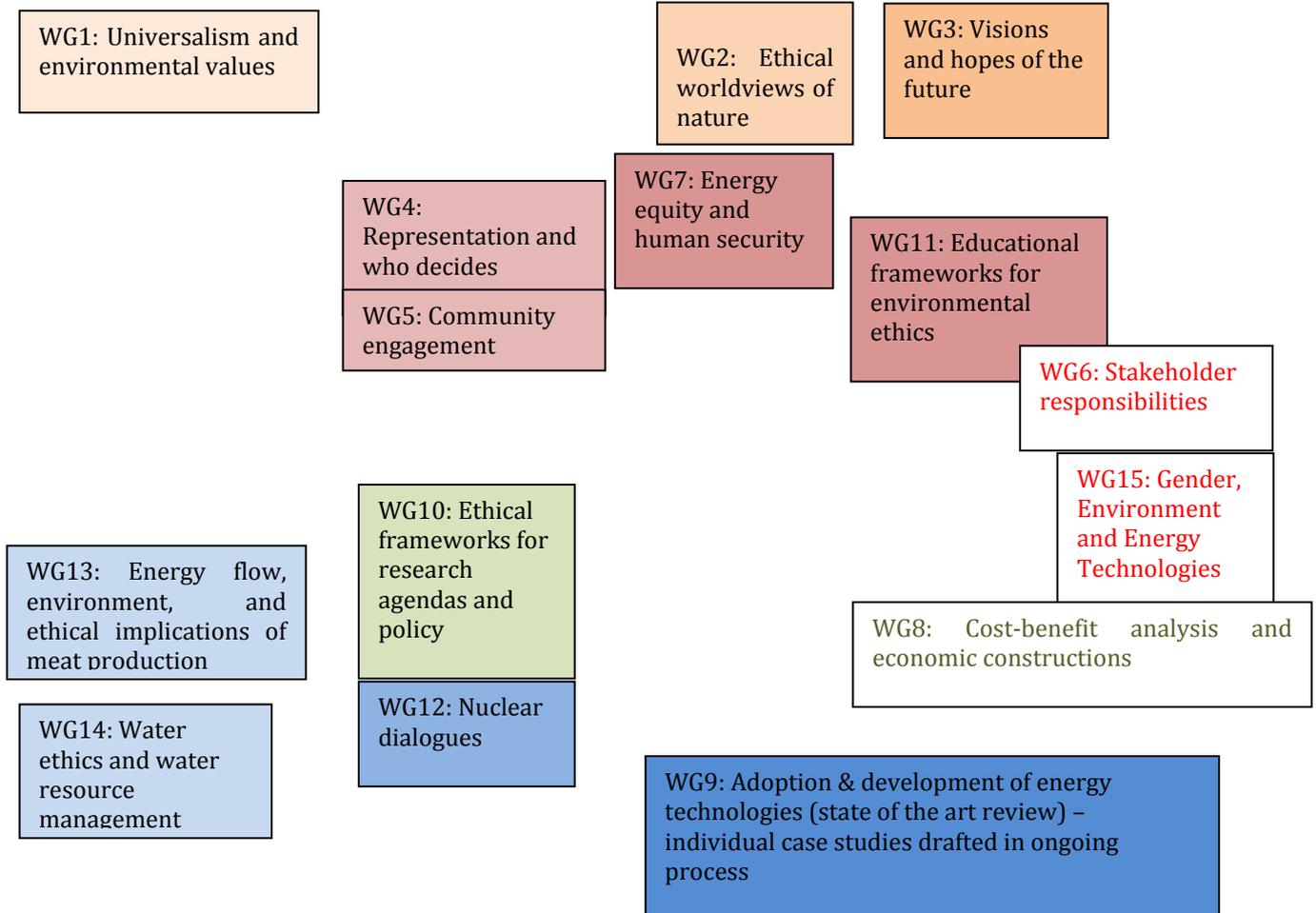
2. Ethical worldviews of nature [Draft outline and call for comments]
 3. Visions and hopes of the future [Draft outline and call for comments]
 7. Energy equity and human security [Draft outline and call for comments]
 9. Adoption and development of energy technologies (state of art review) [Draft outline and call for comments; Update and a case study will be presented]
 11. Educational frameworks for environmental ethics [Draft outline and call for comments]
 15. Gender, Environment and Energy Technologies [Draft outline and call for comments]
- Ethical Principles Framework Explanation [Available on 25 August 2009]

4. Time frame and overview of the relationships of the project working groups

Complete drafts:

Preliminary reports:

Outlines:



In general we request wider variety of case studies for all reports. The reason for case studies from particular countries to be included in the reports is because of limitation of willing authors to contribute reports. It is not to be read as a reflection that the issue is more problematic in one country, nor better solved in one country, compared to others.

5. General Information on EETAP

The Ethics of Energy Technologies in Asia and the Pacific project is not intended to duplicate the numerous meetings being held in the UN and other forums on energy and environment, but to open up ethical and value questions that have often been neglected. Importantly the work can complement the considerations of the ethics of climate change, and development of better policy relating to the environment in general.

The Regional Unit in Social and Human Sciences in Asia and the Pacific (RUSHSAP) was established in 1977 at UNESCO Bangkok as part of the decentralization efforts of UNESCO, and is responsible for coordinated management of Social and Human Science (SHS) sector projects in 47 member countries, in a geographical range from Iran in the West to Japan in the North, and Oceania in the South East.

The EETAP project has produced reports at several stages of review, and in this document we request member countries, institutions and individuals with access to the knowledge to answer the specific questions below, to share the information.

The aim of the working groups is to develop dialogue around these particular issues with a focus on environmental ethics and human security. Each group will produce a report with policy options that can be used by policy makers, civil society, philosophers, scientists and researchers to consider the ethical dimensions of energy policy and activities.

The report development can be followed through the individual working group websites, which include meeting reports and draft outlines of the reports. There is a yahoo group which is used to share information among the 200 plus current members of the project, unesco_eet@yahoogroups.com

The project is open to more people interested in participating in the working groups with a diverse range of experience in energy and environmental ethics, from fields including but not limited to engineering, government, institutional advisory bodies, civil society organizations, energy-related industries, education, and academia. The members participate as individuals in the highest standards of intellectual vigor and integrity. The reports will be subject to peer review, including through circulation to member countries governments, and do not represent the views of partner organizations.

The project was launched in September 2007 with a three day conference hosted by UNESCO Bangkok in collaboration with the Ministry of Science and Technology and the Ministry of Energy, Thailand, attended by a hundred people from over 20 countries, from many sectors and backgrounds, with a range of views on these issues. The project aims to encourage science and value-based discussions on environmental ethics to produce substantive cross-cultural and multidisciplinary outputs that will be relevant for long-term policy making. The primary outputs will be reports with policy options (not recommendations), and the governments of all member countries have been informed and consulted on the project. Since 2007 there have been a number of subsequent conferences and working group sessions organized in different countries, including participation of some COMEST members.

The EETAP project was discussed extensively at the sixth ordinary session of the World Commission of the Ethics of Science and Technology (COMEST), 15-19 June, in Kuala

Lumpur, Malaysia. COMEST also made recommendations on the ethics of climate change and a report.

Many of the working groups will continue to develop further reports, once the initial report has been completed. However, at this stage we seek comments on the reports to further improve them. Please send your contributions as soon as possible, and by the 17 August for finalizing a first set of reports.

6. Specific Requests for Review of Reports that are on-line in complete draft form:

WG1: Universalism and environmental values

1. General review
2. Contributions from different value systems
3. Examples of any ethical principles included in national laws
4. Review of the policy options section and related experience

WG13: Energy flow, environment, and ethical implications of meat production

1. General review
2. Data that show how much of the costs involved in meat production are subsidized, i.e. the amount that taxpayers contribute each year for a particular subsidy like grain, or oil, for example. This could include calculations of "total" external costs.
3. Number of rendering plants and processing capacities. The amount of rendered materials that are used back in the food chain (instead of for soap and cosmetics, for example).
4. Total number and types of animals culled per year.
5. Feed composition and source (imported vs. exported, etc.,).
6. Percent of market share that it is foreign-owned versus local.
7. Amount of money received from multi-lateral financial institutions that have paid for meat-production projects.
8. Other general data such as:
 - (a) Future plans for the creation of new or expansion of existing meat production facilities.
 - (b) Numbers and types of farms by sector (hog, chicken, beef and other) including farm sizes, location, number of head per year, total waste output.
 - (c) Volume or weight of waste (treated and/or untreated) spread on agricultural lands.
 - (d) Volume or weight of waste (treated and/or untreated) released into waterways.
 - (e) Antibiotic use amounts, types, sources.
 - (f) Arsenical use amounts, types, sources.
 - (g) Hormone use amounts, types, sources.
 - (h) Parasitide use amounts, types, sources.
9. Lists of major relevant laws that apply to meat production operations.

WG14: Water ethics and water resource management

1. General review
2. Lists of major relevant laws and policies
3. Case studies from outside of China
4. Review of the policy options section

7. Requests for contributions for Reports that are on-line in preliminary draft form:

A general request for all preliminary drafts is a wider range of case studies in topic and geography. Specific ones include:

WG4: Representation and who decides

1. Review of the Thai case studies and international law aspects.
2. Submission of case studies from other countries.
3. Representation in Multilateral Environmental Agreement Negotiation Processes

WG5: Community engagement

1. Review of the case study.
2. Submission of case studies from other places.
3. Guidelines for community engagement in various fields and countries.

WG10: Ethical frameworks for research agendas and policy

1. Review of the structure and content.
2. Submission of case studies from other countries.
3. Identification of key policy areas.
4. Institutional Structure and Policy Formulation process (ethics committees, technology assessment bodies, etc).
5. Environmental Impact Assessment requirements and evaluation (cases and Strategic)
6. Auditing standards and process

WG12: Nuclear dialogues

Although radioactive waste and nuclear weapons proliferation are discussed in the report, there are many issues which have not been discussed in the report yet.

1. Materials on safety of nuclear power plants. While meltdown incidents have occurred at Three-Mile Island and Chernobyl, nuclear reactors are considered by many to be a safe source of energy. For instance, there have been comparatively few immediate fatalities from nuclear power plants.
2. Future safety of reactors with relation to magnitude of problems, poor safety cultures, low level radiation leaks from such power plants.
3. Nuclear energy-related laws, regulations, and/or guidelines have not been discussed in any length in the preliminary draft report.
4. Particular policy related issues, e.g., how is intergenerational equity reflected in nuclear energy-related laws, regulations, and guidelines in Asia and the Pacific.
5. Case studies involving nuclear energy are welcome, e.g. nuclear concerns and awareness; issues from constructing nuclear power stations; social, community, health, and environmental impacts.
6. Any submissions related to nuclear energy and considered relevant to an ethical analysis of nuclear energy technology will be appreciated.

8. Requests for contributions for Reports with only a draft outline:

WG2: Ethical worldviews of nature

Please refer to the draft report outline, a preliminary draft report will be put on-line in mid-July for further expansion.

WG7: Energy equity and human security

Please refer to the draft report outline, a preliminary draft report will be put on-line in mid-July for further expansion.

WG3: Visions and hopes of the future

Please refer to the draft report outline, a preliminary draft report will be developed after contributions are received and edited for further expansion.

WG9: Adoption & development of energy technologies (state of the art review)

Please refer to the draft report outline, and the framework for questions on several example alternative technologies. Preliminary draft reports on specific technologies will be developed after contributions are received and edited for further expansion. Currently the examples for fuel cells, wind, solar and fuel cells are summarized, but not developed. The first expected complete case study will be on use of algae as a biofuel.

WG11: Educational frameworks for environmental ethics Working Group in Asia and the Pacific

Please refer to the draft report outline, a preliminary draft report will be developed after contributions are received and edited for further expansion.

WG15: Gender, Environment and Energy Technologies

Please refer to the draft report outline, a preliminary draft report will be developed after contributions are received and edited for further expansion.

9. Requests for contributions for future reports that are yet to start:

Attention will be paid to these reports after the above reports are near completion. Submissions and offers to develop outlines are invited.

WG6: Stakeholder responsibilities

WG8: Cost-benefit analysis and economic constructions

EETAP is open to Other Suggestions for Topics

10. Other documents

Overview of Ethical principles for EETAP

In order to develop a framework of environmental ethics it would be useful to investigate how different environmental principles relate to each other and discover whether some derive from others. Please refer to page 7 for an overview of ethical principles – and we invite comments on the relationships between principles, and priorities. Current drafts of the reports have different sets of ethical principles, and a separate document will be provided to introduce these.

11. All submissions to:

For specific information on the ongoing reports please examine the regularly updated working group webpages which list the members, outlines, guideline frameworks and draft reports: <http://www.unescobkk.org/rushsap/energyethics/>, and contact

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