

1.5 Objectives

Overall Objectives

The development of biotechnology is often referred to as a revolution which starts to affect tremendously our age. Examples for its everyday implications are novel food or genetically modified pharmaceuticals, the cloning of animals, gene therapy, genetic testing for employees and insurance companies, etc. There exists a dramatic deficit of knowledge in the national educational systems in the ASEAN countries, regarding the consequences of this biotechnological revolution: There will be far reaching changes in life style connected to immense economical effects. These consequences rise ethically urgent questions, as well as a demand for regulations. On the one hand, there has been a big boom in the biotechnological industry, but on the other hand, education at schools and universities has not been adjusted to it in an appropriate way. Moreover, businesses in the ASEAN countries have been much affected by biotechnology. As these companies try to enter the European market, it is clear that an adequate understanding of the biotechnological issues are very important. Much of what the Thai population hears about the EU through the media is rather negative as it consists mostly of conflicts on trade regulation. Thus there is an urgent need for Thai and ASEAN companies to grasp a fuller understanding of the issues in biotechnology as they are related to their work. This could lead to a better perception and mutual understanding between the EU and ASEAN.

The overall objective of the collaborative training program in "Law, Ethics and Management in the Life Sciences" is to contribute to the effort to comprehend and to cope with these advances in the life sciences and technologies, especially in Asia, where there is the cultural factor involved and where the population appears to be rather vulnerable to these advances; it also aims at introducing the students, who are projected to come mostly from the ASEAN region, into the legal and ethical as well as the economical questions of biotechnology, and at equipping business organizations such that they become more knowledgeable and hence more effective. The program will be conducted in the traditional classroom setting, but it will also be designed in multi-media format accessible on the internet. Such a program is necessary since the fast advancement of biotechnology pressingly demands training in bio-law, bio-ethics and bio-management.

Specific Objectives

The proposed degree program will address this core problem through a system of education to interested parties who will gain knowledge and competence which would arm them with the required tools to cope effectively with these advances. Cultural factors, such as the relation of religion to issues in bioethics and cultural aspects of management as well as the different legal systems in each participating Asian country, will be emphasized, and this will be a distinguishing feature of the program when compared with other such programs in the West. Target groups will benefit from the program in many ways. Firstly, directly through the enrolment in the program, but no less significantly those who do not enrol will also benefit through the various means of dissemination of the knowledge acquired, such as through the Internet, publication series, and through the contacts they will make with those who have already enrolled.

Hence, what the project aims to achieve is an establishment of a collaborative, international training program leading ultimately to an M.A. program which serves

primarily the population and organizations of ASEAN countries, through collaboration with European scholars and academics. This is to fill a large lacuna which currently exists in terms of the various dimensions of the relation between cultural systems and issues arising from the life sciences, such as cloning, gene therapy, gene databanking, genetic modification of organisms, and so on. Close attention to the cultural systems in deliberation on the social, cultural and legal aspects of the life sciences is of crucial importance because it has been shown that perceptions and judgements on these issues depend very much on the culture and the belief systems. Target groups will directly benefit from a clearer understanding gained from the program, which could lead to better understanding among the ASEAN countries themselves and between the ASEAN and EU countries.

1.6 Justification

The proposed project aims at improving the conditions, especially in the ASEAN countries, where there are a number of needs resulting from the rapid advances in biotechnology. Even though it is the case that research and development in biotechnology in these countries lag behind those of the West, there is no excuse for these countries not to investigate the social, cultural and legal ramifications of the technology within the particular contexts of each country. ASEAN is a very diverse region, comprising many traditions, cultures and religions; hence a fuller understanding of these ramifications would be of great advantage not only to the population of these countries themselves, but also those in other regions who will learn more of this interaction between technology and cultures in many dimensions. Furthermore, there are obvious practical needs of individuals and organizations within the region to understand these ramifications of the technology and the life sciences. Industries in ASEAN are in clear need for a fuller understanding of the legal and ethical aspects of biotechnology, as they engage with their global partners in cross-border businesses focusing on products developed through the technology. In fact biotechnology, as is the case for all types of technology, is not a 'pure' technology in the sense that it does not exist in a vacuum or only inside scientific laboratories. On the contrary, biotechnology has become a very powerful tool and engine for modern business and industry. And since business and industry has become globalized, expanding its reach often with no regard to international borders, it is imperative for citizens and organizations in the ASEAN region, which is arguably one of the most economically dynamic regions and which is asserting itself more and more visibly on the world scene, to be provided with opportunities for hard and sustained thinking on these issues, as well as practical expertise arising from it. This is not possible unless they have opportunities to engage in discussions and debates which this project aims to contribute.

- (a) Identification of perceived needs and constraints in the target countries

Target countries for the project are the nine ASEAN countries: Laos, Cambodia, Vietnam, Thailand, Malaysia, Singapore, Indonesia, Philippines, and Brunei. It is expected that most students in the program will come from these countries.

Needs:

- Need for adequate manpower skilled and knowledgeable in bioethics and social, cultural, legal aspects of biotechnology

- Need for adequate understanding of biotechnological issues in business organizations.
- Need for adequate appreciation of the importance of social, cultural and legal issues among health care workers.
- Need for adequate body of knowledge on these matters, especially as pertained to the role of cultural systems.
- Need for a clear understanding and appreciation of the law in each participating country concerning biotechnology and the life sciences.
- Need for a clear understanding and appreciation of the role of ethics and what the various cultural traditions have to say on these issues.

Constraints:

- Most ASEAN countries do not have enough resources to conduct programs of production and dissemination of knowledge on bioethics, biolaw and biomanagement effectively.
- Truly interdisciplinary degree programs that combine diverse fields of study are in short supply.
- Business organizations typically do not possess a strong sense of ethics or responsibility; they mostly view things on a short term basis.
- Business organizations cannot respond well to challenges and advances in biotechnology and trade regulation arising from them.

(b) List of target groups with an estimate of the anticipated number of direct and indirect beneficiaries.

- Individuals in the target countries working in fields that require knowledge on the social, cultural, legal aspects of biotechnology.
These include the following groups:
 - Individuals working in health care, such as doctors, nurses, researchers in the medical sciences, [including medical students \(projected at around 300\), faculty members in medicine and the health sciences \(projected at around 60\), and professionals in medicine and health sciences \(around 100\).](#)
 - Individuals working in law-related areas, e.g., lawyers, judges, public prosecutors, [including law students \(projected at around 300\) and faculty members in law \(projected at around 80\), and professionals \(around 100\).](#)
 - Individuals working in management areas, e.g., managers, executives, administrators, [including students in management areas \(project at around 150\), faculty members in management \(projected at around 60\), and professionals \(around 500\).](#)
 - [Students and faculty members in philosophy \(project at around 80 for students, and around 30 for faculty\).](#)
 - Individuals working in organizations that require knowledge and skills in law, management and ethics
 - Individuals working in academic fields, such as sociologists, philosophers, and professionals in other academic disciplines for whom knowledge and skills obtained from this interdisciplinary program will be of use.
 - Members of the general public who wish to know more.
- Business and public organizations in the target countries requiring thorough understanding of the topics in order to compete successfully in the world market and to keep up with the challenges. Since agriculture and related industries represent the largest and most vital part of the economies of the ASEAN countries, and since biotechnology naturally play an essential role in these industries, careful consideration of social, cultural, economic, and legal aspects of biotechnology are of essential importance. Public agencies are also targeted as they play a very important role in conducting research, making policies, or dispensing justice on these issues.

These include the following types of organizations:

- Organizations dealing with agro-industry, such as food processing, fishery, industrial farming, dairy products, which require intensive knowledge of biotechnology.
- Health care organizations such as hospitals, clinics,
- Government agencies dealing with policy matters regarding biotechnology, such as those in Ministries of Agriculture or of Commerce in the ASEAN region.
- Scientific research institutes, such as the National Center for Genetic Engineering and Biotechnology (genetic research), National Science and Technology Development Agency (science and technology policy).
- Agencies dealing with the law, such as court of justice, office of prosecutors, law firms.
- Related organizations such as those in the service industry.

It is difficult to provide an estimate of the number of direct or indirect beneficiaries of the proposed project. This is so because any number of individuals or organizations can get the benefits of the program. Through the project's scheme of dissemination and publication of course material and other means of reaching out, which will be done not only in Thailand, but in all the participating ASEAN countries, a very large number of individuals and organizations will benefit from the program.

(c) Reasons for the selection of the target groups and activities and relevance of project to target groups.

The above target groups are chosen because it stands to receive direct benefits from the program. More specifically, there are the following reasons:

1. Health care workers will benefit from an exposure to a way of thinking and conceptual tools in philosophy and ethics, which will equip them with a broader horizon which will play a large role in their day-to-day decision making in clinical contexts. Furthermore, they will also be an introduction of basis of management sciences which help them understand their social environment and to make more efficient decisions. The program will differ from traditional programs in biomedical ethics which can be found in most health science curricula in that it will be more interdisciplinary and health care workers will have the opportunities to interact with colleagues in other fields. This will provide a 'human touch' to the health care workers, especially medical doctors, whose education in the medical school, at least in Thailand and probably in other ASEAN countries, do not adequately expose them to the wider context, resulting sometimes in failure of communication or understanding between health care workers and their clients.
2. Individuals specializing in the legal profession will also benefit since the advances in biotechnology, as is well known, require much rethinking of the role of laws and regulations. A [personal communication](#) with a Thai law professor [who is recognized as an expert on the topic](#) shows that judges and attorneys are still grappling with these advances as they show up in legal disputes.¹ So the program will fill this important need for an adequate overview of the legal and ethical aspects of biotechnology.
2. Managers and business executives in organizations that deal with biotechnology will benefit from the cross-intersection between biotechnology and management sciences. They will be a key factor in realizing the type of business organizations that are capable of adapting to the challenges mentioned above.

¹ Personal communication with Dr. Jakkrit Kuanpoj, Sukhothai Thammathiraj Open University, Nonthaburi, Thailand.

3. It is also expected that academics and teachers in the other fields related to the concern of the program will also benefit. Thus the proposed project can also be seen as a way to enhance the capacities of teachers and researchers in the ASEAN region. Not only will the participants, all of whom work in a universities in ASEAN and the EU, benefit, but students in the program who work in the knowledge institutions will also gain valuable experiences and skills in their teaching and conducting research. Hence the result of the proposed project will be multiplied when the students graduate from the program and start teaching about bioethics, biolaw, and biomanagement to their own students.
4. Members of the general public who enrol in the program or who are within the outreach of the project will clearly benefit as they become more aware of the impacts and potential dangers or advantages of biotechnology and current advances in the life sciences. This will lead to a society where the public are well informed about these issues so that they are more capable of making informed judgements. This is truly required in a democratic society.
5. The public and private organizations listed above are chosen according to their direct role as beneficiaries of the knowledge and skills to be acquired from the project.

(d) Relevance of the project to the objectives of the programme (see *Guidelines for Applicants*, section 1.2)

The project fits with the overall rationale of the AUNP programme that aims at enhancing co-operation among institutions of higher learning in the ASEAN and EU. More specifically, it fits with the objective of the programme that calls for 'strengthening co-ordinated and sustainable relations in the field of higher education.' This is attested by the fact that the project is a collaborative and interdisciplinary one. It features collaboration not only between scholars in ASEAN and in EU, but also among the ASEAN countries themselves. Furthermore, the project builds upon existing networks in both Europe and ASEAN, namely BioTethics in Europe, in which Prof. Dr. Jürgen Simon from Lüneburg University and Prof. Dr. Carlos Romeo Casabona are involved. (It is also linked to the ENSLC – Network.), and for ASEAN the network of the dialogue and promotion of bioethics in Asia. [These three networks have started the collaboration initially through the contacts made by Dr. Brigitte Jansen and Prof. Dr. Jürgen Simon with Dr. Soraj Hongladarom when the latter visited Germany on a research trip in the Spring of 2002, and the collaboration was further strengthened by the visit of Dr. Jansen and Prof. Dr. Simon to Chulalongkorn University toward the end of 2002, when the topic of prospective formal collaboration through the AUNP programme was raised for the first time by Prof. Dr. Simon. Furthermore, Dr. Soraj Hongladarom was invited by Prof. Dr. Ryuichi Ida, who was organizing a series of workshop to promote a network of Asian bioethicists for a project, supported by the UNESCO and the Japanese Ministry of Science, on Dialogue and Promotion of Bioethics in Asia. That was where the connection among the Asian bioethics was started. And since Prof. Dr. Simon has had strong contacts with Prof. Dr. Casabona, and Prof. Dr. Ruth Chadwick, also a member of the AUNP project, the collaboration between these existing networks became a reality.](#) Thus the project represents a momentum that has already been in action, and thus it has a potential for creating a common curriculum and course modules/material. The project also enhances the capabilities of the participating academic staffs in ASEAN countries through a series of workshops held both in ASEAN countries and the EU. Reciprocal access to higher education is expected to be realized when students from Chulalongkorn, and from other ASEAN universities, are able to attend courses and seminars in EU universities and vice versa. This is possible since the course of study will be conducted in English. The project will also fulfil

another objective of the AUNP program calling for a fostering of common applied research and sharing of the results and course material, since a significant part of the proposed action will consist of production of course material, both in the national languages and in English, which represents fruits of collaborative research efforts of the participants. Lastly, the project will contribute to raising "*awareness of opportunities in the higher education sector and [developing] links that can ultimately lead to mutually beneficial economic cooperation*" through its system of multipliers which are available in the dissemination of course material through traditional means of publication and on the Internet. The links will be created and sustained through the outreaching program of the project and through further collaborative effort of the already established networks among ASEAN and EU scholars from many disciplines.

(e) Relevance of the project to the priorities of the programme (see *Guidelines for Applicants*, section 1.2 and section 2.1.3 Priority areas)

1. The project is especially concerned on establishing and strengthening networks of intra-ASEAN scholars in diverse fields. This can be seen in the workshops and collaborative effort in producing common course material. The network will be maintained through continuous programs of visiting neighboring countries and constant channels of communication.
2. As for the priority on fields of study which are of common interest by the EU and ASEAN, this can be seen from the fact that advances in biotechnology, together with the trade issues arising from them, do not respect national boundaries. It is in the interest of the world community to pause to reflect seriously about the impacts on human society and culture that these advancements are bringing.

1.7 Detailed description of activities

The project will be done in co-ordinated partial steps by specialized working groups in order to handle the complexity of developing a juridical, ethical and economical further education program. The division into thematic segments will be supplemented by the total of five workshops interspersed throughout the duration of the project. These meetings, and the exchange of the results of the work will guarantee the unity and success of the project. For this purpose, the project will be coordinated. The project-co-ordinator will have various means at his disposal, in particular an internet platform as an organ of internal communication and discussion.

Structure of the working plan

The complex field will be divided into three areas which correspond to the legal, ethical, and economical aspects of the project, with emphasis on the peculiarities of the ASEAN countries that can be found in the various cultures and traditions.

The different working groups will be established by the starting conference of the project, organised by the project-co-ordinator after consultation with the chairs of the working groups. There the members will divide the various workpackages into subunits and deliberate on the content of course material to be written after the workshop.

The working groups will gather for workshops for the total of four times, making the number of workshops five when the introductory one is included. The working groups will discuss the content (see below), which has already been subjected to systematic preliminary discussion at the introductory workshop and clarified amongst the partners in detail. Each partner will take responsibility for specific content and present it in the working groups. After revision according to the comments of the other partner a revised written and internet version will be submitted. The results and the open questions of each working group will be presented as

working papers by the project-coordinator on the Internet. In this way the results and questions of one working group will be made available to the others. This will ensure linkage among the working groups as well as integration of the project as a whole.

The working groups and their work

The introductory workshop (WP 1) serves the following purposes:

- The members will get acquainted with the most recent research projects on ASEAN and EU and national level concerning biolaw, bioethics, and bioeconomics including new developments in further education. The members will reach the same level of knowledge.
- The complex structure of the work will be clarified and the working packages will be described, divided into subunits, and assigned to the different working groups.
- The established working groups will make detailed arrangements for their work packages and course content.

Working group 1: Biolaw

The main objective of the focal point biolaw in the frame of the syllabus is to introduce the students into the presuppositions, regulations, and consequences of biotechnology law and regulations, especially in ASEAN countries, in a scientific profound and altogether practice oriented way. The group has to organise the course in order to prepare and qualify the students for everyday tasks in small and middle-sized companies, administrations with biotechnological focus, but also for large-scale companies, like the chemical industry, politics and ethics committees. The working group has to develop the basic lines so far that the students will learn to understand complex legal problems in the context of everyday business, to judge them, and to eventually solve them in a focused, theory based and altogether pragmatic way, or to transfer them to law experts.

Working group 2: Bioethics

The main objective of the focal point bioethics in the frame of the syllabus is for the second working group to provide the students with scientifically profound and practice oriented access of biotechnology including medical questions and the regulation of biotechnology. Cultural factors will be prominent, as the emphasis will not solely be on the theoretical nature of bioethics as often found in the West. On the contrary, teachings of religions and Asian cultural traditions, e.g., Confucianism or Daoism, will play a large role in deliberation on the issues. The task of this working group is also to offer a program for assistance in everyday moral decision making in biotechnological companies, ethics committees etc. and will impart to master societal controverseries in vindication.

Working group 3: Biomanagement

The curriculum must be developed to introduce the students into structure, organisation, and marketing of companies in a scientifically profound and practice oriented way, with emphasis on the peculiar conditions found in the ASEAN countries. The working group has to develop for this course that the students will be prepared and qualified for everyday tasks in small and middle-sized companies with biotechnological focus (hospitals, pharmaceutical companies etc.), but also for large scale enterprises like the chemical industry. The working group has to work out that the students learn to understand and judge economical problems and questions concerning management in the context of everyday business and will therefore be capable of focused and pragmatic decision making, also in difficult and complex situations. At the end of the course the students should be fit for starting their own business.

Integration of the working groups in the project as a whole

All working groups have to work together on the implementation of the trial and on the establishing of the internet platform.

Workpackage description

For the purpose of identifying the partners and persons involved, the following scheme will be used:

Partner A	Chulalongkorn University
Partner B	Vietnam National University
Partner C	University of Philippines, Diliman
Partner D	University Sains Malaysia
Partner E	University of Lüneburg/European Academy for Environment and Economy
Partner F	University of Lancaster
Partner G	Universidad del País Vasco/Euskal Herriko
Unibestsitatea	(University of the Basque Country)
Partner H	Friedrich-Schiller-Universität Jena

Tentative List of Persons Involved in the Project

Person 1	Soraj Hongladarom
Person 2	Somporn Promta
Person 3	Sudharm Yunaidharm
Person 4	Pareena Supjariyavatr
Person 5	Siriyupa Roongrengsuke
Person 6	Sarote Phornprapha
Person 7	Leonardo de Castro
Person 8	Le Dinh Luong
Person 9	Chan Chee Khoon
Person 10	Jürgen Simon
Person 11	Brigitte Jansen
Person 12	Ruth Chadwick
Person 13	Carlos Romeo Casabona
Person 14	Nikolaus Knoepfler

Remarks: Persons 1-6 belong to Partner A; Person 8 to Partner C; Person 9 to Partner B; Person 10 to Partner D; Persons 11 and 12 to Partner E; Person 13 to Partner F; Person 14 to Partner G, and Person 15 to Partner H.

WP 1 – Introductory Workshop

Start date: Month 1

Responsible Partner: A

Partners involved: Partners B, C, D, E, F, G, H

Location: Bangkok

Persons involved: 1 – 14

Objectives

The introductory workshop serves to make the partners of the project acquainted with the most recent results of research in biotechnology and developments in further education in Europe.

Description of work

The introductory workshop is prepared and organised by the project co-ordinator, after consultation with the chairs of the working groups and the members of the economic/management group. During the conference, the experts (Nos. 11-14) present the most recent developments in their scientific field altogether with other experts. The chairs of the working groups and both partner of the economic/management group introduce into the planned curriculum in detail. The project co-ordinator presents the overall methodology and the project's investigation and organisation process. The work group chairs depict the methodology and work process of their specific work groups (including the economic/management partners). The lectures are discussed in the plenary assembly of all members. The working groups are established under the chairpersonship of their head and make detailed arrangements for their future work.

Deliverables

The opening lectures, together with the scientific, ethical, legal, economical and methodological structuring of the curriculum will be summarised and given to the partners through the Internet.

Milestones and Expected Results

The different approaches and contents of scientific, legal, ethical, economical and methodological disciplines are represented and detailed work plan will be designed. [It is expected that a collection of papers presented at the Workshop will be published.](#)

[\(Remark: This introductory workshop has not been organized yet.\)](#)

WP 2, 5, 9, 12 – Course Material on Bioethics

Start date: Month 2

Location: Varies according to the location of the participating partners

Responsible Partners: A, B, C, F, H

Persons involved: 1, 2, 7, 8, 12, 14

Objectives

The main objective for these work packages is to produce course material on bioethics and to provide the students with scientifically profound and practise oriented access to ethical theories with special emphasis on the role of cultures. It should be worked out how an "overlapping consensus" could be achieved for the ASEAN and EU level.

Description of work

When the group will develop a scientifically profound and practically oriented access to ethical theories with emphasis and sensitivity to cultural factors, the access provided must help one to judge the research, the developments, and the application of biotechnology including medical questions and the regulation of biotechnology. The task of this working group is also to offer a program for assistance in everyday moral decision making in biotechnological companies, politics and administrations as well as in ethics committees within the differing cultural milieux of the ASEAN countries, and to impart competence to master societal controverseries in vindication.

Deliverables

The papers and other course material produced by the working group will be collected and be the basis for discussion and the organising of the course of study.

Milestones and expected results

The results of this working group will be the fully worked out program for the ethical courses.

WP 3, 6, 10, 13 – Course Material on Biolaw

Start date: Month 2

Location: Varies according to the location of the participating partners

Responsible Partners: Partner A, E, G

Partners involved: Partners 3, 4, 5, 10, 11, 13

Objectives

The workpackages include to develop the legal contents of the curriculum in the different member countries of ASEAN and EU within a similar methodology.

These workpackages will the students introduce into presuppositions, regulations and consequences of biotechnology law in the ASEAN and EU contexts. The group has to organise the contents of the course and the legal curriculum in detail.

Description of work

The group has to organise the course in order to prepare and qualify the students for everyday tasks in enterprises, administrations, politics, or ethics committees. Care will be taken to ensure the local legal conditions in the ASEAN and EU countries as regards to biotechnological issues. The working group has to develop the basic lines so far that the students will learn to understand complex legal problems in the context of everyday business, to judge them, and eventually solve them in a focused and pragmatic way. The differences in problem-solving in the member states of the EU and ASEAN will be discussed on the basis of cases. Of importance will be the possibility of future harmonising the different regulations in the member states and international cooperation between ASEAN and EU.

Deliverables

The papers and course material produced by the working group on the development of the legal course will be collected, worked out and be the basis for discussion and the organising of the course of study.

Milestones and expected results

The results of the working group will be the fully worked out program for the legal courses.

WP 4, 7, 11, 14 – Course Material on Biomangement

Start date: Month 2

Location: Varies according to the location of the participating partners

Responsible Partner: A, D, E

Partners involved: Partners 6, 7, 9, 11

Objectives

The main objective of this group is to develop a course for the introduction of the students into structure, organisation and marketing of companies in the biotechnological field in a scientifically profound and practise oriented way. Emphasis will be put on the structures and conditions of business organizations in the ASEAN countries.

Description of the work

The working group has to develop a curriculum for this course which will guarantee that the students will be prepared and qualified for everyday tasks in companies with biotechnological focus, both in the ASEAN and EU member states. The working group has to work out papers so that the students learn to understand and judge economical problems and questions concerning management in the context of everyday business and will therefore be capable of pragmatic decision making, also in difficult and complex situations. At the end of the course the students must be fit for starting their own businesses.

Deliverables

The papers of this working group on the development of the economic/management course, with special emphasis on the conditions of companies in the ASEAN and EU countries, will be collected, worked out and built the basis for discussion and the organising of the of the course of study.

Milestones and expected results

The results of this group will be the fully worked out program for the economic/management courses.

WP 8 – The Second Workshop

Start date: Month 10

Responsible Partner: E

Location: Lüneburg

Partners involved: Partners A, B, C, D, F, G, H

Persons involved: 1 – 14

Objectives

The purpose of the Second Workshop is to let the members of the three working groups to meet each other in the same group as well as those from different groups. The setting will be in Europe, to reflect the cooperative nature of the project, since the Introductory Workshop will have been held in Thailand by the Applicant.

Description of Work

By the time they come to the Workshop they will have finished the introductory material on bioethics, biolaw and biomanagement, which will form the introductory material for the program of study. This material will be shared and commented upon by the partners of the project. Any problems that may have occurred during the time since the Introductory Workshop will be ironed out, and the chart for the preparation of the Advanced level course material will be discussed.

Deliverables

The opening lectures, together with the scientific, ethical, legal, economical and methodological structuring of the curriculum and the presentation of course material will be summarised and given to the partners through the Internet. After the Workshop a report will be written to summarize what has been discussed and what outcome emerged.

Milestones and Expected Results

The participants should gain a clear idea on the course material that they have developed, as well as the one to be developed further. Expected results include further collaboration among the participants and clearer and more attuned picture of what lies ahead.

WP 15 – The Third Workshop

Start date: Month 17

Responsible Partner: F

Location: Lancaster (tentative)

Partners involved: Partners A, B, C, D, E, G, H

Persons involved: 1 – 14

Objectives

The purpose of the Third Workshop is to let the members of the three working groups to meet each other in the same group as well as those from different groups.

Description of Work

By the time they come to the Workshop they will have finished the further material on bioethics, biolaw and biomanagement. This material will be shared and commented upon by the partners of the project. Any problems that may have occurred during the time since the Second Workshop will be ironed out. One of the important tasks for the Third Workshop is to think through and lay out the final details of the course of study program (WP 9) to be conducted at Chulalongkorn University.

Deliverables

The opening lectures, together with the scientific, ethical, legal, economical and methodological structuring of the curriculum and the presentation of course material will be summarised and given to the partners through the Internet. After the Workshop a report will be written to summarize what has been discussed and what outcome emerged.

Milestones and Expected Results

The participants should gain a clear idea on the course material that they have developed, as well as the one to be developed further. Expected results include further collaboration among the participants and clearer and more attuned picture of what lies ahead.

WP 16 – Training Session

Start Date: Month 18

Closing Date: Month 24

Responsible Partner: A

Other Partners: B, C, D, E, F, G, H (contributing the course material)

Location: Bangkok

Objectives

This work package describes the course of study and training session to be conducted at the place of the Applicant (Chulalongkorn University). The purpose of the work package is to implement the prepared course material to actual teaching practice.

Description of Work

The program of study will be in a traditional classroom setting, with ample uses of information technology to enhance the effectiveness of the program. Students will have a lot of opportunities to interact actively with instructors and with their peers. The program will be a basis on which further development into a full M.A. program later on.

Deliverable

A series of training programs that will have conducted in seminars in traditional classroom settings.

Milestones and Expected Results

It is expected that students will gain the expertise and will see the connection between ethics, law and management on biotechnological issues. The program will form a basis upon which an M.A. program will be developed.

WP 17 – Evaluation and Final Workshop

Start date: Month 24

Responsible Partners: A

Other partners: B, C, D, E, F, G, H

Location: Bangkok

Persons involved: 1 – 14

Objectives

The purpose of the Evaluation and the Final Workshop is to sum up the activities of the project and to present the participants with the opportunities to reflect on future activities.

Description of Work

The Workshop will again be held at the Applicant's campus. The members responsible for conducting the course of study (WP 9) will report on their activities, as well as their experiences and problems they faced during the teaching program. Opportunities will also be given to alumni and alumnae of the program to view their assessments and their impressions of the program at the Workshop. Research work on cultural implications of bioethics, biolaw and biomanagement, which will have been conducted in parallel with the teaching program, will also be reported. The course material will also be evaluated by the participants of the project themselves as well as by invited outside experts. Possible shortcomings of the entire project will be identified. Finally a chart for future activities, including both the teaching program leading to the M.A. and the research collaboration, will be laid down.

Deliverables

The opening lectures, together with the scientific, ethical, legal, economical and methodological structuring of the curriculum and the report on the teaching and training program will be summarised and given to the partners through the Internet. A report of the Workshop will be given that details the proceedings of the Workshop as well as a plan for future collaborative activities.

WP 18 – Research Work

Start date: Month 1

Responsible Partners: A

Other partners: B, C, D, E, F, G, H

Location: Bangkok

Persons involved: 1 – 14

Objectives

The purpose of this workpackage is to stimulate further interest in bioethics, biolaw and biomanagement among scholars in ASEAN and EU (with preferences for the former) who are not participating directly in the Project through provision of research grants. This is foreseen to be an important aspect of the Project in that it will create a multiplier effect whereby the scholars will also be known as resource persons for bioethics, biolaw or biomanagement in their institutions.

Description of Work

Ten grants, each set at 1.000 EUR, will be provided to qualified researchers and scholars through open calls for proposals and rigorous peer review. The 14 members of the Project will act as selection committee, and each is expected to solicit researchers from their own institutions, though preferences will be given to institutions in the participating ASEAN universities. It is expected that the output of each research grant will be a publishable paper, which will be presented at the workshops, and will also be edited and included in the volume published by the Project. It should be noted that the participating members of the Project are not eligible for these grants.

Deliverables

Ten high quality, publishable research works, in form of academic papers, which will be published in the main output publication of the Project.

1.8 Methodology

(a) Methods of implementation

Implementation of the project consists chiefly of three major parts, namely documentary research and discussion leading to the teaching program, the actual teaching program itself, and the four workshops to be held throughout the program. The Center for Science, Technology and Society at Chulalongkorn University, directed by Dr. Soraj Hongladarom, will be the core organization that oversees and implements the project. More specifically, there will be a Teaching Committee who is responsible for the teaching task. The committee, whose members are all faculty of Chulalongkorn University, will take responsibility for conducting all the training sessions. They will meet at least once every two month in order to monitor the progress of the project, to chart the course for the future activities, and to share research results and other experiences. The team will consist of the following persons (tentative):

Dr. Soraj Hongladarom, Department of Philosophy, Faculty of Arts
Dr. Siriyupa Roongremngsuke, Sasin Graduate School of Management
Dr. Sarote Phornprapha, Sasin Graduate School of Management
Dr. Somparn Promta, Department of Philosophy, Faculty of Arts
Dr. Sutham Yoonaitam, Faculty of Law
Dr. Pareena Supjariyavatr, Faculty of Law

This team will be supplemented by the three working groups who are responsible for producing the course material. These working groups are the ones who will work on material on bioethics, biolaw and biomanagement respectively, and will consist of members of the project who belong to other partner institutions than the applicant. Naturally there will be intensive collaborative and coordinating efforts among the two groups. Basically speaking, the Teaching Committee will be responsible for the actual task of teaching, while the three working groups, while the three working groups will produce the material. Coordination can be ensured by the fact that members of the Teaching Committee will also belong to the working groups according to their respective expertise.

Here is the tentative list of the members of the three working groups:

Group One: Bioethics

- Prof. Dr. Leonardo de Castro, University of Philippines
- Prof. Dr. Ruth Chadwick, Lancaster University
- Dr. Soraj Hongladarom, Chulalongkorn University
- Dr. Somparn Promta, Chulalongkorn University
- Dr. Brigitte Jansen, Lüneburg University /European Academy for Environment and Economy
- Prof. Dr. Nikolaus Knoepffler, Friedrich-Schiller-Universität Jena

Group Two: Biolaw

- Prof. Dr. Jürgen Simon, Lüneburg University/ European Academy for Environment and Economy
- Dr. Sutham Yunaidharma, Chulalongkorn University
- Dr. Pareena Supjariyavatr, Chulalongkorn University
- Prof. Dr. Carlos Romeo Casabona, Universidad del País Vasco/Euskal Herriko Unibertsitatea (University of the Basque Country)

Group Three: Biomanagement

- Dr. Siriyupa Roongremngsuke, Chulalongkorn University

- Dr. Sarote Phornprapha, Chulalongkorn University
- Dr. Chan Chee Khoon, University Sains Malaysia
- Dr. Brigitte Jansen, Lüneburg University /European Academy for Environment and Economy

As for the evaluation and advisory function of the project, the Teaching Committee will report to an advisory committee to consist of the following:

- Vice-President for Research Affairs as Chairperson
- Vice-President for Academic Affairs
- Dean of Graduate School
- Dean of Faculty of Arts
- Dean of Faculty of Law
- Director of the Sasin Graduate School of Business Administration
- At least one outside expert on ethics
- At least one outside expert on law
- At least one outside expert on management
- Dr. Soraj Hongladarom will act as secretary (with no voting power)

The task of the advisory committee will be to monitor the progress of the Teaching Committee and to give advice. It will also act as the evaluating committee for the project. Outside experts can consist of those from ASEAN or EU countries who have no vested interests with the project.

First of all, the four workshops will form the backbone around which the training sessions will wrap themselves. That is to say, the workshops will formulate a set of working guidelines and directions for the entire project. They are vital to the success of the project in that they are the only opportunities for the participants in the project, who live far away from each other, to actually meet and form networks. It is true that the Internet can facilitate such meetings and discussions, but it has been demonstrated that face to face meetings are more effective at promoting and sustaining relationships that can last well beyond the duration of the project itself.

The generic format for the workshops may consist of the following items, which are not exclusive:

- Invited opening lectures by well known personalities
- Presentation of the teaching material
- Comments on the presentation of teaching material by a designated commentator and discussion
- Presentation of research papers by members of the project on issues related to the academic objectives of the project
- Comments of each of the presented paper by a designated commentator and discussion
- General discussion

The methodology for writing the training course material will consist mostly of documentary research for the case of bioethics, and social scientific research for the cases of biolaw and biomanagement. However, these two major types of methodological framework will intersperse among the different working groups as the entire context of the project is interdisciplinary in nature. For example, for the bioethics case empirical research methodology, such as interviewing, questionnaire, or field work, may be employed in order to gather viewpoints on how cultures and religions

view the emerging biotechnological issues. On the other hand, biolaw and biomanagement will also employ theoretical reflection also. In any case, the working groups for each of the three disciplines will decide which methodology is best for their respective course material output. Apart from the face to face meeting every month, all members of the Teaching Committee will stay continuously in contact with one another through e-mails and mobile phones. The Committee will share results and discuss together how to deal with the obstacles and problems that could come up during the course of the writing.

Lastly, the methods used for the training session itself will consist chiefly of classroom meetings, seminars and discussions. **It is projected that the number of attendants to the training session will be around 100.** Close interaction between the students and the instructors, who are expected to be rather mature and are in the midst of their career, will be provided with up-to-date course material. In addition, they will have ample opportunities to think through and discuss the problems that have arisen in Asian contexts owing to the rapid advances in life sciences and biotechnology. Outside experts, such as respected monks, social critics, philosophers, or judges, will be invited as occasional guest lecturers and discussion leaders to broaden the horizons of the students. Traditional classroom settings and seminars are advantageous, especially in the Asian and European contexts, because the students are not quite used to distance learning, and for the foreseeable future, the most effective way of teaching in Asia still appears to be the traditional settings. However, the program will also rely on an extensive use of information and communication technologies to supplement the classroom teachings and discussions. Emails and websites will form the backbone of this use of information technologies to enhance learning potentials. Moreover, another thing the students and instructors are expected do together is to stay in contact after the classroom hours through dedicated channels of a chat forum. Apart from the usual e-mails and websites, which are asynchronous, students and instructors can by this means engage in real-time conversation and discussion.

In all aspects of the project, decision making will be a collective one; consultation and discussion will be made at every step where decisions are needed. Ideally, there should be a consensus on every aspect of the project. But even though this may not be achieved in reality, any differences that might occur will be discussed through emails and in the workshops.

(b) Reasons for the proposed methodology

Main reasons for holding the workshops:

1. To ensure close interaction and participation of all the participants who live far away from one another.
2. To formulate a clear guideline on how to proceed with the teaching sessions (Introductory Workshop)
3. To share and exchange course material files that have been produced in order to receive feedbacks, comments and suggestions.
4. To enhance the capabilities of the members of the project.
5. To share research experience and results on the topics related to the project.

Main reasons for conducting the teaching sessions:

1. To implement the core objective of the project in disseminating knowledge and skills on bioethics, biolaw and biomanagement with emphasis on the cultures of the ASEAN and EU countries.
2. To disseminate knowledge and awareness of the social, cultural and legal contexts of the life sciences and biotechnology.
3. To build a multiplying network of those who are aware of and sensitive to the social, cultural and legal aspects of biotechnology that will benefit the ASEAN, European and global societies.

Main reasons for the methodology of mostly documentary research (with occasional field work, questionnaire or interviewing) leading to the teaching material

1. Documentary research is the core of humanistic, philosophical research that informs the production of teaching material in bioethics. This will be the major methodological framework for the bioethics part of the project. However, this is by no means the only framework, as conditions may well dictate uses of social scientific or empirical framework.
2. Social scientific research methodologies such as interviews, field work, questionnaires, as well as possible uses of statistics, will be the framework for the biomanagement part.
3. The biolaw part will also employ documentary research typical of legal research.

(c) How the project intends to build on a previous project or previous activities (where applicable)

This project builds upon the previous projects organized by Prof. Dr. Jürgen Simon and Dr. Brigitte Jansen of Lüneburg University/European Academy for Environment and Economy in Germany; as well it is also linked to BioTethics. That project is an EU only project aiming at creating a program of study on bioethics, biolaw and biomanagement. This present project adds the Asian elements and contexts to the project of organizing teaching and training sessions on bioethics, biolaw and biomanagement. However, this addition is not a mere transfer of already existing material from BioTethics to the ASEAN LEMLIFE. New research will need to be done since the social, cultural and legal contexts in the EU and ASEAN are different, not to mention to differences within the member countries themselves. Thus the project being proposed here is a new one though it can trace its origin through the EU BioTethics project.

(d) Procedures for internal evaluation

The Advisory Committee mentioned in Section 1.8 (a) will act as the main advisory and evaluating body of the project. Evaluation will be performed by measuring the benchmarks that have been set in advance in the provided Logical Framework. The Advisory Committee may appoint a subcommittee consisting of a group of external evaluators, to judge the performances of the project as a whole as well as its component parts (teaching, producing course material and workshops). [Members of this subcommittee consist of two to three experts in the areas relevant to the project but having no vested interest the project itself, and one or two non-academic staff of Chulalongkorn who are knowledgeable about quality assurance and performance assessment.](#) It is expected that the subcommittee (or the Advisory Committee itself) will perform such assessments every six month throughout the duration of the project. The assessment will be done by comparing the measurable outcomes and results of the project up to the time with the Objectively Verifiable Indicators specified in the Logical Framework.

- (e) Level of involvement and activity of other organisations (including partners or others) in the project

Partner B: Vietnam National University

Vietnam National University (VNU) will act as a scientific adviser to the project, and will contribute more specifically to the deliberations on issues in bioethics and research ethics. The delegate from VNU will be invited to attend all the workshops, take part in the discussions, and present his or her views on bioethical matter, especially as it concerns the specific context of Vietnam and ASEAN.

Partner C: University of Philippines, Diliman

University of Philippines, Diliman will contribute to the writing of a volume of course material on bioethics and to take part in all the workshops. More specifically, the delegate from the University of Philippines will write a volume on the relations between bioethics and Asian culture.

Partner D: University Sains Malaysia

University Sains Malaysia will contribute to the writing of a volume of course material on biomanagement and to take part in all the workshops. More specifically, the delegate from the University Sains Malaysia will contribute to the discussion on health care policy issues in the Asian context.

Partner E: Lüneburg University/European Academy for Environment and Economy

Lüneburg University will contribute to the writing of a course material on biolaw, and to take part in all the workshops. More specifically, the delegates from Lüneburg University will write one or two volumes on biolaw, especially concerning the laws of the EU that have bearings on the conduct of businesses in the ASEAN region. Moreover, Lüneburg will also contribute to the discussions and research activities on the social and legal aspects of biotechnology and the life sciences.

Partner F: Lancaster University

Lancaster University will contribute to the writing of a course material on bioethics and to take part in all the workshops. More specifically, the delegate from Lancaster will write on basic theoretical issues in bioethics, and the current status of the debates and discussions on bioethics in the West

Partner G: Universidad del País Vasco/Euskal Herriko Unibertsitatea (University of the Basque Country)

Universidad del País Vasco/Euskal Herriko Unibertsitatea (University of the Basque Country) will contribute to writing a volume of course material on biolaw and to take part in all the workshops.

Partner H: Friedrich-Schiller-University Jena

Friedrich-Schiller-University Jena will contribute to writing a volume of course material on bioethics and to take part in all the workshops.

Some partners, such as Partner D, already have signed a contract of academic collaboration with the Applicant. And the members of all the Partners have known each other through their already existing networks in bioethics.

(f) Reasons for the role of each partner

Reasons for Partner B:

Partner B has expertise in molecular biology, and is thus valuable as one who is actively engaging in front-end research in the life sciences. Furthermore, cooperation with Vietnam will contribute to strengthening the capabilities of higher education in the country.

Reasons for Partner C:

Partner C is particularly strong in the Asian component of bioethics, and is thus perfectly suited to join the project and to write the course material on the topic. Furthermore, cooperation with the Philippines will contribute to strengthening the capabilities of higher education in the country.

Reasons for Partner D:

Partner D has expertise in ethical and policy issues in science and technology, and is recognised internationally as an authority on health care policy and ethics. His concern has been over the just distribution of health care services in the poorer countries. He is also active in organizations such as the World Health Organization and the European Commission as an expert in this area. His role in the project is thus highly valuable.

Reasons for Partner E:

Partner E is the key in this collaborative effort. The original BioTethics project, originated in the EU, is this Partner also. The delegates from the Partner are particularly strong in the legal aspects of biotechnology, and will be a great asset to the success of this present project. His work on insurance law and legal aspects of gene databanking will provide many benefits to the project.

Reasons for Partner F:

The delegate from Partner F is well known internationally for her work on bioethics. Her contribution will be particularly valuable since she will add the expertise and philosophical acumen to the discussions and debates. The objective of the Project of initiating debates on cultural presuppositions and implications of bioethics will be given a much needed impetus in terms of theoretical background and experiences of the same types of debates in the West.

Reasons for Partner G:

The delegate from Partner G is also well known internationally as one who has been working actively in law and genetic technology, especially on the legal aspects of the human genome. He has written a number of publication, both in Spanish and in English, on such topics as legal reform of organ transplantation, law and human life and on law and medicine. Thus his contribution to the project will be a highly beneficial one as he adds to the legal aspects of the life sciences and biotechnology, thus providing the needed perspective from the EU on this matter.

Reasons for Partner H:

The delegate from Partner H has been working actively in applied ethics, including business ethics and medical ethics. Thus he will be able to contribute to the workgroups both in bioethics and biomanagement. His focus on the value of humanity will be of great value to the project. This is so because, as there is the added dimension of cultural factors when scholars from the EU and the ASEAN engage in cultural encounters and dialogues, the delegate's expertise and experiences in human value, as well as his interdisciplinary knowledge, will provide an impetus toward more substantive discussions in this intercultural context.

(g) Team proposed for implementation of the project (*by function: there is no need to include the names of individuals here*)

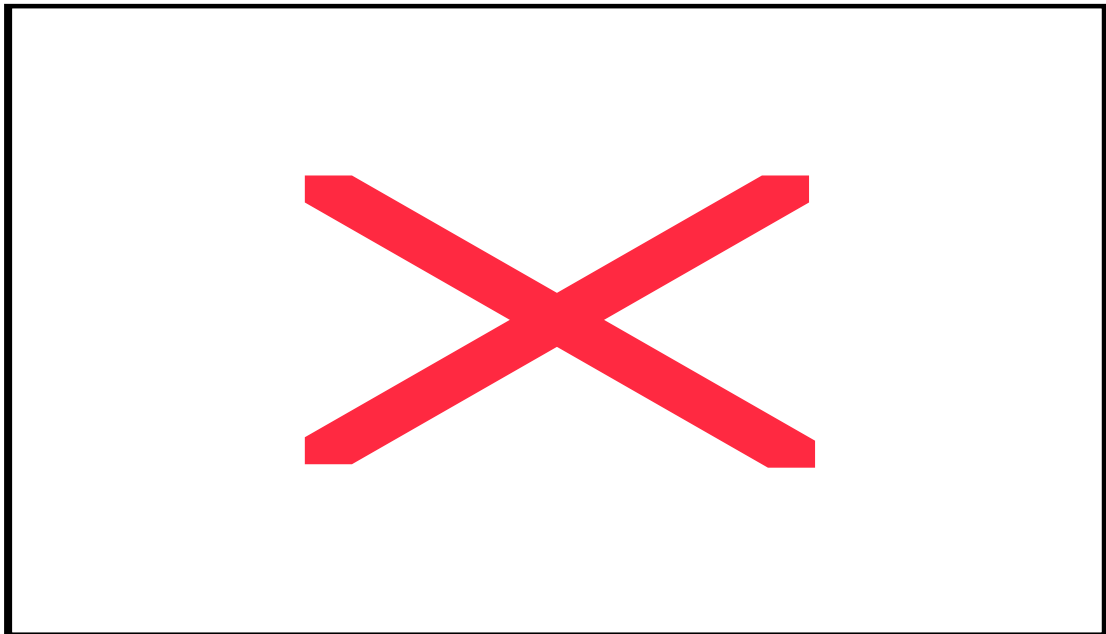
The team will consist of the following persons:

Name	Institution	Role in Project
Soraj Hongladarom	Chulalongkorn University	<i>ASEAN Co-ordinator</i> , Bioethics working group
Somparn Promta	Chulalongkorn University	Bioethics working group
Sudharm Yunaidharm	Chulalongkorn University	Biolaw working group
Pareena Supjariyavatr	Chulalongkorn University	Biolaw working group
Siriyupa Roongrerngsuke	Chulalongkorn University	Biomanagement working group
Sarote Phornprapha	Chulalongkorn University	Biomanagement working group
Leonardo de Castro	University of Philippines, Diliman	Bioethics working group
Le Dinh Luong	Vietnam National University	Scientific adviser, bioethics
Chan Chee Khoon	University Sains Malaysia	Biomanagement working group
Jürgen Simon	Lüneburg University University / European Academy for Environment and Economy	<i>EU Co-ordinator</i> , Biolaw working group
Brigitte Jansen	Lüneburg University University / European Academy for Environment and Economy	Bioethic and Biomanagement working group
Ruth Chadwick	Lancaster University	Bioethics working group
Carlos Romeo Casabona	Universidad del País Vasco/Euskal Herriko Unibetsitatea (University of the Basque)	Biolaw working group

	Country)	
Nikolaus Knoepffler	Jena University	Bioethics working group

Except for the Applicant, each partner institution is represented by one participant only, so that participant becomes the project leader or manager in that institution. As for the Applicant, Dr. Soraj Hongladarom, who is the main co-ordinator of the entire project, will act as leader.

The overall structure of the project is as follows:



1.9 Duration and plan of action

Year	Activity	Location (city)	Implementing body
	<i>(example)</i>		<i>(example)</i>
Year 1			
Month 1	Introductory Workshop (WP1) Dissemination of calls for proposals (WP 18)	Bangkok Participating institutions	Applicant (Partner A) Applicant (Partner A)
Month 2-6	Preparation of Bioethics Course I (WP2)		Partner A, B, C, F, H
Month 2-6	Preparation of Biolaw Course I (WP3)		Partner A, E, G
Month 2-6	Preparation of Biomangement Course I (WP4)		Partner A, D, E
Month 4	Selection and announcement of eligible research projects (WP 18)		Applicant
Month 6-9	Preparation of Bioethics Course II (WP 5)		Partner A, B, C, F, H
Month 6-9	Preparation of Biolaw Course II (WP 6)		Partner A, E, G
Month 6-9	Preparation of Biomangement Course II (WP 7)		Partner A, D, E
Month 10	Second Workshop (WP 8)	Lüneburg	Partner E
Month 11-12	Preparation of Bioethics Course III (WP 9)		Partner A, B, C, F, H
Month 11-12	Preparation of Biolaw Course III (WP 10)		Partner A, E, G
Month 11-12	Preparation of Biomangement Course III (WP 11)		Partner A, D, E
Year 2			
Month 13	Preparation of Bioethics Course III (WP 9)		Partner A, B, C, F, H
Month 13	Preparation of Biolaw Course III (WP 10)		Partner A, E, G
Month 13	Preparation of Biomangement Course III (WP 11)		Partner A, D, E
Month 14-16	Preparation of Bioethics Course IV (WP 12)		Partner A, B, C, F, H
Month 14-16	Preparation of Biolaw Course IV (WP 13)		Partner A, E, G
Month 14-16	Preparation of Biomangement Course		Partner A, D, E

	IV (WP 14)		
Month 17	Third Workshop (WP 15)	Bilbao or Lancaster	Partner F or G
Month 18-24	Course of Study (WP 16)		Applicant
Month 24	Evaluation and Final Workshop (WP 17) Presentation of the granted research papers (WP 18) in the Final Workshop (WP 17)	Bangkok Bangkok	Applicant Applicant

2. Expected results

2.1 Estimated impact on target groups

(a) how the project will improve the situation of the target groups

Many groups of individuals will benefit through the activities initiated by the Project. The training sessions will directly benefit as they find themselves in need of an adequate grasp of the social, cultural and legal aspects of the life sciences. Since the program of study will be international, the estimated impact will be greater than a normal, country-based program alone. Moreover, as many who come to the program are expected to be mid-career professionals, such as those working in agencies dealing with public health or science policy, the impact will be measurably greater. As stated in the section on Justification, the situation of individuals will be improved through the detailed knowledge and skills offered by the program.

More specifically, the needs of the individuals mentioned in the section on Justification will be addressed by the project directly. Since there is the problem of chronic manpower shortage in the ASEAN countries, especially those who work in the areas where the life sciences, biotechnology and social and cultural issues interact, the project aims at correcting this situation through the production of course material and training sessions.

As for the business organizations and relevant government agencies, the Project will help improve their situation through the program of disseminating knowledge and skills aimed at raising their awareness and competency. This is so because, as previously stated, business organizations, at least in the ASEAN countries, are currently much in need of adequate knowledge of regulations concerning biotechnology as well as other social and cultural aspects. The businesses will become more aware of the need for the regulations and will become more active and responsible partners in the global discussion and dialogs on the role of biotechnology in trades. Moreover, as many countries in the ASEAN are trying to push forward their own scientific and technological development program, which would lead them out of total dependency on the western countries in science and technology and further toward endogenous development, the need for effective understanding of such issues has assumed greater significance.

(b) how the project will improve the managerial and technical capacities of the target groups or the partners (where applicable)

The Project will directly contribute to the managerial capabilities of the target groups, both individuals and organizations, through its management part of the program. However, this is not to be seen as a separate domain where management can be

isolated from the other sectors of the Project. On the contrary, all the three sectors—ethics, law and management—are inseparably intertwined, as the main objective of the project is not just to juxtapose these three elements together, but to create a synergy, an emergent effect, which will be created by close cooperation among the three.

2.2 Publications and other outputs

Here is a list of proposed published outputs (tentative):

Course Material in Bioethics

- Basic concepts of bioethics; Ethical theories; Principles of bioethics
- Ethical issues arising from health care, genetically modification, genomics, and others.
- Bioethics and culture; cultural implications of bioethics, possibility of Asian bioethics.
- Bioethics and Buddhism; specific issues arising from considering bioethical from Buddhist perspectives; perspectives from other religious traditions.

Course Material in Biolaw

- Basic concepts of biolaw; legal theories, principles of biolaw.
- Legal issues arising from health care and new biotechnological developments and methods as genetically modification, genomics and so on.
- Laws and regulatory schemes in the EU and Asia.
- Comparison of laws and regulatory schemes in the EU and Asia (working book of cases).

Course Material in Biomanagement

- Principles of Management in Biotechnology
- Understanding principles of management
- Awareness of managerial role in biotechnology

- The marketing of Biotechnology product and service
- Principles of Marketing
- Marketing strategies for biotechnology product and service

- Leadership and Social Responsibilities in the Management of Biotech-Industry.
- Business ethics in the management of Bio-industry
- Training human resources to work for biotech- industry.

- Public health management: emergence of new diseases such as SARS and Nipah

Proceedings and Report

- Proceedings and Report of the First Workshop

- Proceedings and Report of the Second Workshop
- Proceedings and Report of the Third Workshop
- Proceedings and Report of the Fourth Workshop
- Overall Report of the ASEAN-EU LEMLIFE Project

The course materials will be published both in paper and electronically. The goal is to distribute them as wide as possible so as to maximize the impact. They will be available for use by the students enrolled in the course of study, and it is also project that they will be later translated into Thai and other local languages. The proceedings are the reports of the four workshops. They will contain not only the ideas toward the course materials, but also papers on various aspects of biotechnology and the life sciences which are contributions to academic research. The proceedings will be published in English in book form. Finally, the Overall Report will give the big picture of the entire project after it has been completed.

In sum, the publication of the entire project is broken down as follows:

Books:

Biotechnology in Society: Ethical, Legal and Management Issues from ASEAN and EU (This book will be the main output of the project where the teaching materials are contained.)

Proceedings and Report of the ASEAN-EU LEMLIFE. (This will be a collection of all the proceedings and reports from the workshops, including the granted research projects.)

Website:

Main website of the project will be set up at Chulalongkorn University. It will contain all the material presented in the workshops as well as the first draft of the teaching materials. Chat forum will also be available.

Newsletters.

The project plans to issue newsletters occasionally in order to disseminate its findings to the public.

Special Issues of Journals:

The papers presented in the workshops will be edited and submitted to academic journals, some of which will be contacted to publish special issues.

2.3 Multiplier effects

It is proposed that the following methods be employed to ensure the most widely distributed means of communicating the results of the Project to the global public:

Use of Information Technology

It is proposed that a website of the Project be set up. It will contain all the pertinent information of the project, including the course material and papers presented during the four Workshops, plus links to other external sources of useful information. The website will be the main portal through which the public can learn about and learn from the Project. The server for the website will be located at one of the computers belonging to the Project, which will be continuously connected to the Internet through Chulalongkorn University Network. The use of a dedicated server is advantageous in that the staffs of the Project have total control of the content and the limit of the information provided on the website will only be that of the hard disk of the computer itself. A new domain name will be requested for the website. This is quite important because the URL will be easily remembered, thus enhancing more connections.

Apart from the information provided on the website, either through internal or external links, another important feature of the site is that users can interact with themselves and with the Project staffs through the chat forum that will be put on the website. The forum will be a channel by which public discussion on biotechnological issues can take place. The language will be in English and in Thai, and it is possible that the same such fora be set up in other universities in the region in their local languages.

Paper Publication

The Project also aims at publicizing itself through the traditional means of paper publication. A brochure detailing the work and the training sessions to be offered later on during the Project will be printed and distributed to various higher education institutions and concerned government agencies both in Thailand and in the other ASEAN countries. Co-ordinating bodies such as the ASEAN University Network (AUN) will be contacted to help with the distribution and dissemination of the information through its member universities in the region. A brochure will be published during the first six months of the Project in order to let the public know about the Project and its missions. Then toward the start of the Course of Study another brochure will be published to give details of the Course. Apart from the brochures, various posters and flyers will also be published to attract attention of potential students in the Course of Study and to let them know about the activities of the Project.

Furthermore, the course material and the papers presented at the Workshops will also be made available through the publication program. External agencies such as the Chulalongkorn University Press or other publication venues will be contacted to publish all or some of the outputs of the Project.

Contact with the Media

In Thailand, the media are quite powerful in shaping public opinion on a number of issues. Thus, it is vital for the success of the Project to have good contacts with members of the local media. The media will be invited to take part in and to learn from the activities of the Project in many steps. More specifically, they will be asked to participate in the Workshops, and the published course materials and other papers will be given to them. Another thing which is quite certain to attract visibility in Thailand is for the events such as the Workshops to invite well known personalities to preside at the opening ceremonies or to give papers. Thus well known and respected senior academics or high ranking personalities will be invited. This will automatically attract media attention.

Contact with Other Networks

Another way of ensuring multiplying effects is to maintain contacts with other networks on the same topics. Many members of the Project already have their own networks, which can be put to use by contacting them and collaborating with them on a number of issues.

2.4 Sustainability

- (a) financial sustainability (*How will the activities be financed after the EC funding ends?*)

Financial stability of the Project can be ensured when the projected course of study, which at first is in form of a short course program only, develops into a full blown degree program. Thus income will be generated through the fees paid by the students. Though the objective of the Project is to establish a short term training program only, it is strongly expected that this will develop further into a degree program, leading first to the M.A. and possibly to the Ph.D. later on. This is so because, in the context of Chulalongkorn University, setting up a new degree is a time consuming task, and it is unrealistic to develop a full degree program in only two years. Since the program will be an international one, fees will be substantially higher than if the program were taught in Thai only. In any case, even though the process leading toward an M.A. program will be a long one, the short term training sessions can continue after the Project ended. Revenue earned from these sessions can also ensure financial viability of the Project. Moreover, it is expected that sales of the course materials and other publications will also generate income.

- (b) institutional sustainability (*Will structures allowing the activities to continue be in place at the end of the present project? Will there be local "ownership" of project outcomes?*)

The Project will be managed by the Center for Science, Technology and Society (CSTS), which is a research unit set up by Chulalongkorn University in order to focus resources available in the university to tackle issues emerging from the intersection between science, technology and society. Chulalongkorn University has already pledged support to the Center for five years, and there are plans for continuing research and other activities of the Center well beyond that period. the CSTS will act as the local 'owner' of the Project. More specifically the Center will act as a co-ordinating place where the network that has been established will be maintained. Moreover, the ASEAN University Network will help support the network maintenance through its series of meetings and conferences.

The CSTS has as one of its objectives to raise the awareness of the Thai and international public on issues related to the relations between science, technology and society and culture. It has the program of organizing meetings, conferences, workshops, etc. aiming at creating a public space whereby science and technology are not viewed as sacrosanct and autonomous body of knowledge, but instead as products of human culture, which as such products, are subject to various human concerns. Hence the work of the Project, as part of the activities of the Center, will form part of the ongoing activities of public networking which can be sustained.

- (c) sustainability at the policy level (where applicable) (*What will be the structural impact of the project – e.g. will it lead to improved legislation, codes of conduct, methods, etc?*)

Sustainability at the policy level can be created through the program of the CSTS on public networking (mentioned in the previous sub-section) which will be joined by various government agencies dealing with policy analysis and the think tanks both

from the public and private sectors. It is expected that many who come to take part in the training sessions to be organized by the Project will come from these agencies. Thus this will be a way where the networking between policy agencies and the Project can be created and maintained. The participation of scholars from the EU who are members of the Project will be highly beneficial as their expertise will be transmitted through the Workshops to be organized and other means. But what is perhaps more important is that, since one of the aims of the Project is to analyse the role of Asian cultures in bioethics, biolaw and biomanagement, European scholars will not always be on the giving end. On the other hand, partners from the other ASEAN countries will also contribute a good deal to the Project as they relate their own experiences and expertise based in their respective societies to the international pool of resources. The implication of this international interaction on the science and technology policy making bodies is that they will be able to take part in this public sphere and receive input from the ground as to where the policies on scientific and technological issues should be heading. This will ensure that the process of policy formulation is a democratic one. It is quite true that, in Thailand at least, the agencies responsible for science and technology policies often organize their own workshops and meetings in order to gauge public opinion and to receive input. In most cases such processes are transparent and well thought out. However, the activities proposed by this Project, such as the training sessions, workshops and publication, will not only contribute to this democratic process in science policy, but also to add another dimension from institutions of higher education which are directly responsible for teaching and doing research. As public agencies, the science policy bodies, such as the National Science and Technology Development Agency, are rather limited in their capacities to train and to develop curricula. Hence, with the contribution and cooperation of the many institutions of higher learning which are partners in the Project, a strong synergy should then develop as a result of the partnership between the government policy bodies and the universities both in the ASEAN and the EU. Thus it is quite conceivable that the Project will be able to sustain itself through this synergy. As the governments see the importance of public research and outreaching programs initiated by the Project, it is foreseeable that more support will come in the future.

Sustainability can also be maintained through the input offered by the Project itself. For example, discussions on regulations of controversial topics such as gene databanking and genetically modified food, and other new issues that will surely crop up in the near future, can lead to changes in existing legislation, or creation of new ones. The biolaw part of the Project will engender a sustained effort aiming at criticizing the extant legal system and at proposing new legislation that can cope with the new advances. This cannot be effectively done at all without input from other disciplines, which consist not only of the technical life sciences. Thus the Project lies at a very important point for the tasks of the ASEAN and EU countries in their attempts to comprehend these new advances and to find ways to regulate them. The CSTS has positioned itself as a contributor to this growing debates and studies from the perspective of an independent research organization which does not belong to the government.

It may be important to note here that the task of the Project and the CSTS in general is not to pressure the government on any particular issue. The Project by no means conceives of itself as an activist one aiming at changing policies to its own preferences. On the contrary, the CSTS and the Project strongly believe that the best

way possible for effecting public policies is through the democratic process taking place in public sphere where no one is coerced or pressured in any way. As Jürgen Habermas has shown, this is only possible if the parties entering the sphere are equal in the sense that they are all capable of thinking for themselves and to make judgements based on the best available reasoning which are made plain to everyone. In the real contexts of science and technology policy making, this means that the citizens themselves are at least knowledgeable to some extent of the issues involved. It will not do to deliberate on, say, gene therapy or gene databanking, if some parties entering the debate have no idea of what a gene or a strand of DNA is. The Project believes that the process of policy evaluation, analysis and formulation should not be left to the hands of the experts alone, for they are not qualified to deliberate and to pass judgements of the social, cultural, legal, and ethical dimensions of issues in science and technology. For these matters, the experts are as qualified as anybody else. Hence the Project, and the work of the CSTS in general, will contribute to this very important aspect of a democracy.