

**THE DEVELOPMENT OF ENVIRONMENTAL MANAGEMENT
SYSTEM GUIDELINES FOR SUSTAINABLE TOURIST
ATTRACTIONS : A CASE STUDY OF BANG SAEN BEACH
IN CHONBURI PROVINCE**

The background features a large, faint watermark of the Mahidol University logo. It is a circular emblem with a yellow border. Inside the border, there is a blue circle containing a golden stupa (a traditional Buddhist monument) with intricate carvings. The Thai text 'มหาวิทยาลัยมหิดล' (Mahidol University) is written in a circular path around the stupa.

MAITREE BUDDHAWONG

**A THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR
THE DEGREE OF MASTER OF SCIENCE
(ENVIRONMENTAL PLANNING FOR COMMUNITY
AND RURAL DEVELOPMENT)
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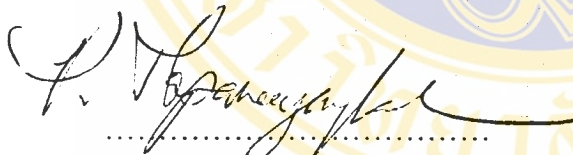
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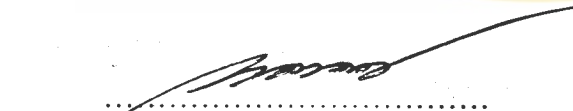
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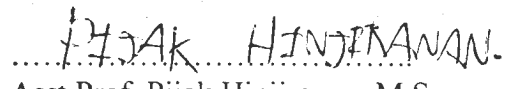
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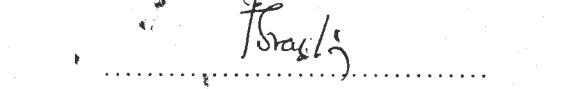
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Maitree Buddhawong

THE DEVELOPMENT OF ENVIRONMENTAL MANAGEMENT SYSTEM
GUIDELINES FOR SUSTAINABLE TOURIST ATTRACTIONS : A CASE STUDY
OF BANG SAEN BEACH IN CHONBURI PROVINCE.

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ABSTRACT

The objective of this exploratory research was develop environmental management system applicable to tourism resource management by local administrative organizations. The Delphi technique and questionnaire was administrated to 38 experts in tourism. These results environmental management system requirements, and then formed the basis for establishing. For this study, Bang Saen beach is administrated by the Municipality of Muang Saen Suk.

Using check list, it was developed for this study found that the Municipality of Muang Saen Suk met 64.95 % the requirements. This indicates that the Municipality of Muang Saen Suk has a potential for developing tourism resources according to environmental management system requirements.

The findings of the study indicated that the development of environmental management system for tourist attractions by local administrative organization should be supported. They should educate staffs; establish environmental criterias for tourist attractions; and involve members of the tourism industry.

KEY WORDS : DEVELOPMENT / SUSTAINABLE TOURISM / GUIDELINES /
ENVIRONMENTAL MANAGEMENT SYSTEM / ISO 14001

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แนวทางการพัฒนาระบบการจัดการสิ่งแวดล้อมเพื่อการพัฒนาแหล่งท่องเที่ยวอย่างยั่งยืน กรณีศึกษา
ชายหาดบางแสน จังหวัดชลบุรี (THE DEVELOPMENT OF ENVIRONMENTAL
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ATTRACTIONS : A CASE STUDY OF BANG SAEN BEACH IN CHONBURI
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บทคัดย่อ

การวิจัยเชิงสำรวจนี้มีวัตถุประสงค์เพื่อศึกษาแนวทางการนำระบบมาตรฐานการจัดการสิ่งแวดล้อมมาประยุกต์ใช้ในการบริหารจัดการทรัพยากรท่องเที่ยว โดยองค์กรปกครองส่วนท้องถิ่น โดยอาศัยเทคนิคเดลฟาย และใช้แบบสอบถามผู้เชี่ยวชาญด้านการท่องเที่ยวและมาตรฐานจำนวน 38 ท่าน จากนั้น จึงนำผลการจัดทำระบบมาตรฐานดังกล่าวไปทดลองดำเนินการในพื้นที่ชายหาดบางแสน ซึ่งดูแลโดย เทศบาลเมืองแสนสุข

ทั้งนี้ จากการประเมินความสอดคล้องโดยอาศัย ตาราง Check List พบว่า การดำเนินการของเทศบาลเมืองแสนสุขมีความสอดคล้องกับข้อกำหนดที่จัดทำขึ้น ประมาณร้อยละ 64.95 ของระดับความสอดคล้อง เห็นได้ว่า เทศบาลเมืองแสนสุขมีศักยภาพที่จะพัฒนาระบบการบริหารจัดการทรัพยากรท่องเที่ยว ตามแนวทางระบบมาตรฐานการจัดการสิ่งแวดล้อม

จากการวิจัยครั้งนี้ การพัฒนาระบบมาตรฐานการจัดการสิ่งแวดล้อม เพื่อการบริหารจัดการแหล่งท่องเที่ยว โดยองค์กรปกครองส่วนท้องถิ่น จำเป็นต้องได้รับการสนับสนุนและเตรียมความพร้อมในด้านต่างๆ เช่น ด้านบุคลากร การจัดทำตัวชี้วัดที่มีความเหมาะสมกับแหล่งท่องเที่ยวประเภทต่างๆ ตลอดจนการให้ผู้แทนจากภาคเอกชนมีส่วนร่วมในการบริหารจัดการทรัพยากรแหล่งท่องเที่ยว

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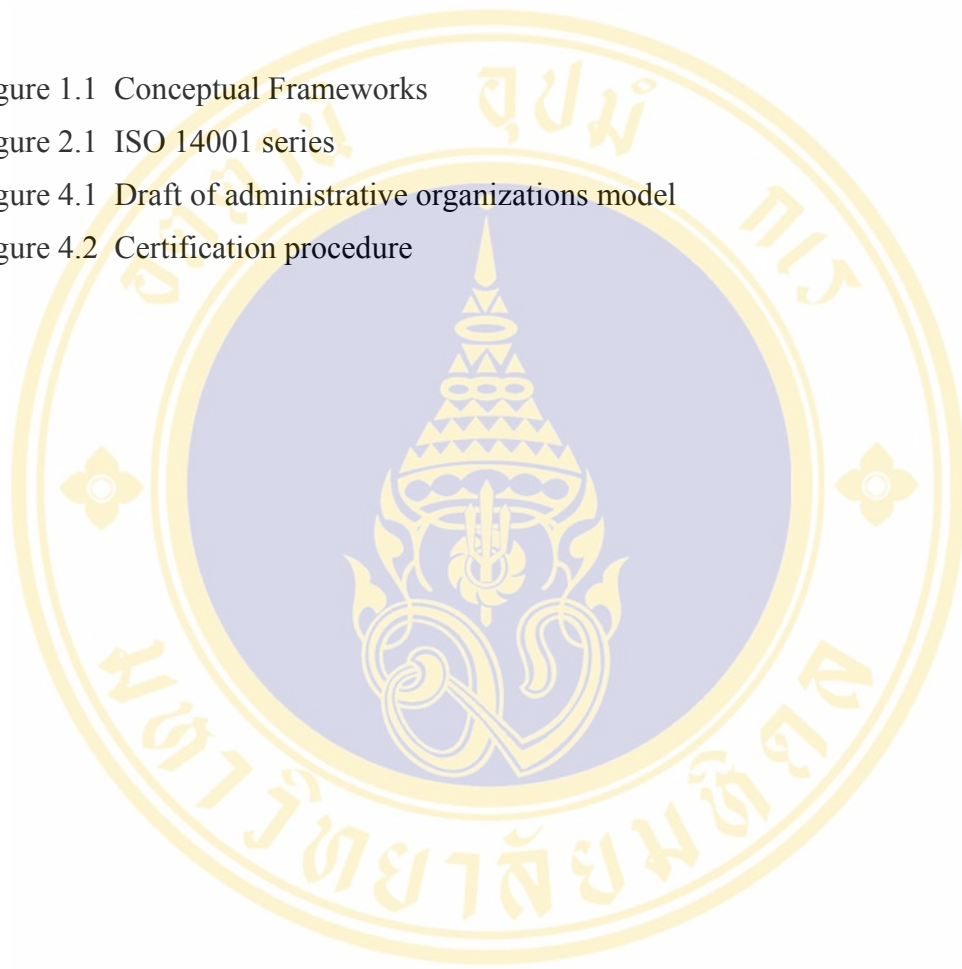
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CHAPTER I INTRODUCTION

1.1 Background and Problem Statement

Environmental problem occurs in various parts of the world; its impact has seriously expanded to the whole world until to be the global problem. Leading commercial countries bring some environmental protection measures, contracts and agreements to be trade conditions, as the method described that “Business and environment should be carried out in parallel in order to the sustainable development and the balance between socio-economic and environment”.

In past, business was to respond customer’s needs which required new and modern products. Thus the producers had developed their products without realization of environmental impacts. Besides, the selling price was set from capital and marketing cost, excluding the cost of environmental damage from production procedure.(Sayam Arunrimorakot, 2000)

In Europe, the current production are developed in technology and management which concerns environmental conservation aspect. Moreover, many consumers require products and services that indicate their supports for protecting environment or friendly environment product. For this reason, producers will improve their businesses to respond the consumer’s attitude changes by using certification scheme, e.g. green label or eco-labelling – a certification scheme in which a product or service may be awarded an ecological label on the basis of its “acceptable” level of environmental impact. The acceptable level of environmental impact may be determined by consideration of a single environmental hurdle or after undertaking an assessment of its overall impacts. (Synergy, 2000 as quoted in Martha Honey and Abigail Rome 2002: 6) The products certified by green label are required from the consumers who alert to environmental conservation and healthiness. Although the current green label certification is a voluntary program, but it has a trend to be a significant tool for marketing and trade barrier in future. (Thailand Productivity Institute, 2002)

Tourism is an industry as similar to other industries which have procedures on producing and selling. Tourism is an activity which uses natural resources as the attractive point for sale. Therefore, several governments had put strong emphasis on tourism promotion and development more than 50 years. (Chayaporn Chunrongroj, 1997) Since the Tourism Authority of Thailand was founded by the vision of Field Marshal Sarit Dhanarajata, who saw that tourism would have an important role in Thailand's economic, social and political development. Therefore, he set up a permanent office in the form of a state enterprise under the Prime Minister's Office called the Tourist Organization of Thailand (TOT) on July 28, 1959. Later, TOT was renamed to Tourism Authority of Thailand (TAT) on May 4, 1979 as the Tourism Act of 1979. In 1982, Thailand became the country's leading income earner as compared to other export countries, and it maintained top rankings in Asia Pacific region in the following years. Besides, Thailand launched the campaign entitled "Visit Thailand Year" in 1987, "Amazing Thailand" in 1998-1999. And in 2000, tourism industry generated revenue of 285,539 million baht; this revenue helped the country to ease its economic crisis. It is a fact that countries around the world, particularly developing countries, use tourism industry as a primary tool in generating foreign revenue. This has led to widespread competition for tourists. (Tourism Authority of Thailand, 2000) For the last year of the 9th National Economic and Social Development Plan, it is estimated the number of foreign tourists not less than 14 million people, the growth rate would increase 7% per year. (Tourism Authority of Thailand, 2001)

Although tourism sector generates revenue and employment, it encounters many problems, especially environmental problem. From an increase of tourist arrivals, requirements in infrastructure and facilities shall increase too. These cause an excess of carrying capacity which they will have impacts on environment, community, culture such as the problem of deteriorated attractions. Besides, most of tourists and entrepreneurs lack the knowledge on natural resources conservation, causing pollution in tourist attractions, e.g. waste seawater, litter, obstruction of scenic views, unsuitable building or landscape, construction too close to beaches or other attractions. (Wanna Wongvanich, 1996)

From the TAT lists of deteriorated attractions, it was found 179 places of deteriorated attractions in 49 provinces, a main cause is from physical and environmental problems or 59.82 %, e.g. poor town planning, invasion of tourist

attractions, uncomfortable access to tourist attractions, inappropriate landscaping, poorly-designed hotel, and other tourist facilities that are incompatible with local architectural style and scale or not integrated into the natural surroundings. The problems are from improper management of environmental pollution such as litter, air, water, noise pollutions and lack of related knowledge, resulting in environmental and natural changes. (Tourism Authority of Thailand, 1997)

As previously mentioned, the deterioration problem of tourist attractions has seriously increased, although the past implementation for environmental conservation and rehabilitation has been continuously carried out for efficient utilization more than sustainability. Or it was to cope with the problems more than protect the problem proactively. Moreover, the government lacks proper management and can not solve these problems efficiently such as centralization administration not comply with the problems, situation and local requirements. These problems lead to conflicts between government agencies and people in rural areas, including contests. Therefore, the government should review an appropriate direction and process to develop and administrate in compliance with situations. Besides, the government should improve an administration of government agencies and give opportunities for local people to participate in environmental management. Furthermore, an acceleration in environmental rehabilitation and conservation for the next 5 years should be considered for the followings:

- role of local administrative organizations at all levels
- people participation in awareness and preservation of environmental quality
- role of private sector joint in the environmental management
- appropriate technology for environmental management in compliance with local knowledge and experiences

From the realization of public belongings in environment, people should take part in environmental management and conservation; moreover, the government should encourage people in using natural resources efficiently. (The Committee on restructuring an organization for environmental management, 2002)

Environmental Management Standard ISO 14001 is a mean for environmental management and conservation which is the proactive measure and is significant in protecting environment more than solve the problem. Besides it is flexible in implementation and opens opportunities for other agencies and organizations to identify

implementation details to comply with their requirements and readiness. This system is a development tool for local administrative organizations which has potential, readiness, requirements and development in different levels to apply for administrating tourist attractions.

For selection of study area, the researcher used the data from the results of interesting attractions priority of Thai and Foreign visitors in the Review of Thailand Master Plan for Tourism Development. It was found that beach destinations is the most popular, mountain and waterfall and historical places respectively. (The Tourism Authority of Thailand: 1993) Moreover, the study area is administrated by local administrative organizations and not far from Bangkok. Therefore the researcher set the development of environmental management system guidelines for sustainable tourist attractions in Bang Saen beach, Chonburi province to be a study area. This area is administrated by the Municipality of Muang Saen Suk which close to environmental management. The study results will be guidelines for tourism certification under the local administrative organizations' responsibility. Further, tourist attractions will be led to the procedure of environmental deterioration protection and developed to the quality destinations.

1.2 Objectives

- To study environmental management system guidelines for tourist attractions administrated by local administrative organizations.
- To acknowledge and identify condition, limitation and constraint for applying environmental management system as a guidance to determine tourism certification for tourist attractions

1.3 Scope of the Study

The development of environmental management system guidelines for sustainable tourist attractions is an exploratory research. The study location is in Bang Saen beach, Chonburi province, and the researcher studied on development means for sustainable tourist attractions, environmental management system, sample of environmental management system for tourist attractions in order to determine means

applying for appropriate system in environmental management for sustainable tourist attractions. In this case, the researcher used Environmental Management Standard ISO 14001, Blue Flag and Tourism Certifications as guidelines for conducting environmental management system requirements and tourism certification.

1.4 Conceptual Framework

The development of environmental management system guidelines for sustainable tourist attractions in Bang Saen beach, Chonburi province is an exploratory research which the researcher determined to implement a draft of environmental management system requirements and model of administrative organizations. The main content of the study is focused on ISO 14001 and Blue Flag. Then questionnaires were submitted to 38 experts by based on Delphi technique to obtain the appropriate requirements and administrative organizations model. Then the researcher criticized and evaluated the requirements before experiment in study area in order to assess the compliance between the requirements and practice of the Municipality of Muang Saen Suk. After that, the researcher concluded the result of this study and submitted the development mean of environmental management system requirements for sustainable tourist attractions.

1.5 Expected Results

- To be a development mean in establishment of environmental management system for tourist attractions efficiently.
- To be guidelines in environmental management for tourist attractions administrated by local administrative organizations in other areas.
- To certify the quality of tourist attractions for tourists in making a decision to visit.

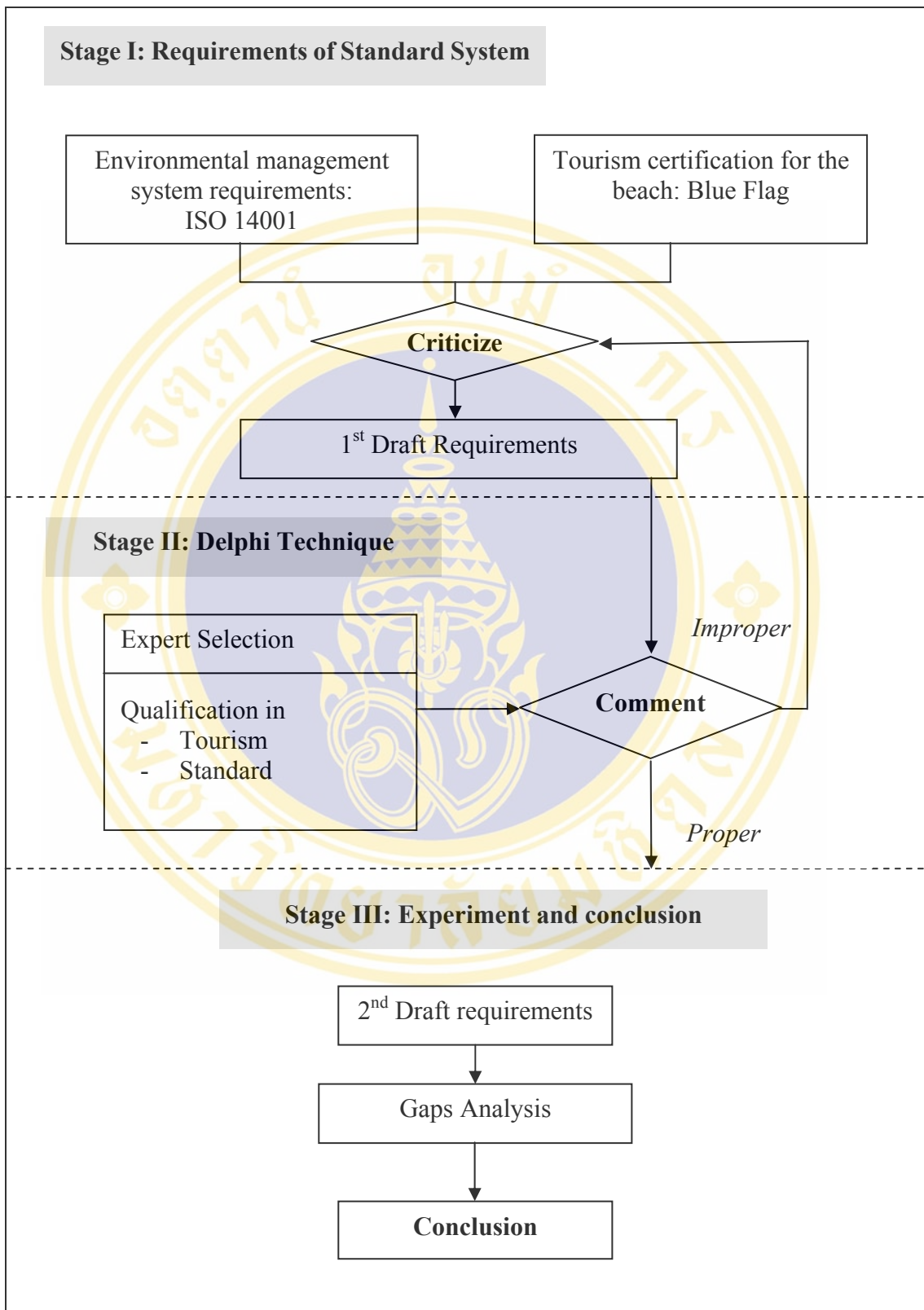


Figure 1.1 Conceptual Frameworks

CHAPTER II

LITERATURE REVIEW

In this chapter, the researcher has studied the concepts, theory and document concerned with the development of environmental management system guidelines for sustainable tourist attractions: a case study of Bang Saen beach in Chonburi province. The reviewed concepts are as follows:

- 2.1 Tourism
- 2.2 Sustainable Development
- 2.3 Sustainable Tourism
- 2.4 Tourism Impact to Environment
- 2.5 Tourism Certification
- 2.6 Guidelines to Develop Certification Systems
- 2.7 Blue Flag

2.1 Tourism

2.1.1 Definition

The World Tourism Organization (as quoted in Rainforest Alliance, 2003: 312-313) defined tourism as “the activities of persons traveling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes”.

M.L.Tui Chumsai (1984 as quoted in Wanna Wongwanich, 1996: 5-6) said about the meaning of tourism and traveling in “the first of tourism” that tourism is a travel. If there is no traveling, there is no tourism. In tourism aspect, the meaning of tourism and traveling are often integrated by the tourism operator. Sometimes they used the meaning of tourism to cover both tourism and traveling, such as, the name of tourism organization “Tourism Authority of Thailand”

Chulalongkorn University (1984) defined the meaning of tourism as a type of human needs, when physical and emotional needs were fulfilled. The purposes of tourism were as follows:

1) Curiosity to discover new things from tourism. There were differences in cultures, traditions, politics, society and individuals, exceptional aspects of nature and natural phenomena as well as unknown matters.

2) Relaxation from daily stresses, such as, traveling to places with natural beauty, arts and music or other entertainment. They included traveling to amusement parks, zoos, bars, nightclubs or shopping.

3) Interests in religion and mysticism, such as, religious, pilgrimage, visiting historical or holy sites, meetings, including the religious activities

4) Vocation and business, for instance, traveling for research, conference, seminars, site visits and education. This was like traveling to increase knowledge.

Other purposes of tourism, such as, visiting relatives and friends. Such a travel usually took place during holidays and festivals. It was a meeting among friends and relatives in order to relax.

Seree Wangpajit (1991: 12) gave the meaning of tourism as visiting a place for sight seeing, visiting friends and relatives, taking short or long vacations, and also refers to trips for business, conference, political call, and research by any transportation.

Wanna Wongvanich (1996: 7) concluded that tourism depends on 3 conditions:

1) Traveling from a place of residence to other places temporarily.

2) Traveling with voluntariness

3) Traveling with any purposes, not for earning a living or making income

Mc Intosh and Goeldner (1986) said that tourism can be identified in four different perspectives:

1) Tourist seeks various psychic and physical experiences and satisfactions. The nature of these will largely determine the destinations chosen and the activities enjoyed.

2) Business provides tourist goods and services. Business people see tourism as an opportunity to make a profit by supplying the goods and services that the tourist market demands.

3) The government of the host community or area, politicians view tourism as a wealth factor in the economy of their jurisdictions. Their perspective is

related to the incomes, their citizens can earn from this business. Politicians also consider the foreign exchange receipts from international tourism as well as the tax receipts collected from tourist expenditures, either directly or indirectly.

4) Host community, local people usually see tourism as a cultural and employment factor. An importance of this group, for example, is an effect of the international visitors and residents. This effect may be beneficial or harmful, or both.

Thus, tourism may be defined as the sum of the phenomena and relationships arising from the interaction of tourists, business suppliers, host governments, and host communities in the process of attracting and hosting these tourists and other visitors.

2.1.2 Components of tourism

Thailand Institute of Scientific and Technology Research (1999: 2-7 to 2-14) concluded that tourism is a social and economic process, which consists of 3 components: tourism resource, tourism service and tourism market or tourist. Each of components has sub-components that they are related to each other. Therefore the differences of each tourism are depended on sub-components and their relations.

Relation of the 3 sub-systems began when tourist used tourism resources for recreation or visual education, or it may be directly used benefit from concerned services.

Normally, tourism is a resource that non-consumption use, because the type of utilization is often external touch, and it can not be moved. Besides, it may be compensated all the time. In fact, the utilization of tourism resources is often transformed without realization of losses and effects on sub-systems and environment.

In the other hand, environment system such as community system, industrial system have effects on tourism system. Thus, tourism lacking in good management is unsuccessful. Besides the internal components of tourism system have many signification for environmental situations concerned, such as, physical conditions and ecological system, environment, infrastructure, economy and investment, society and culture, government and individual cooperation organization, and law that support development and promote tourism, etc.

2.1.2.1 Tourist Attractions

Tourist attractions are significant resources and they are the tourism supply. Thailand have tourist attractions that are mostly concerned with base of folk styles such

as natural, historical, archaeological, traditional and cultural resources. From the past to the present, Thai tourism management were divided from natural tourism and cultural tourism (including history and archaeology).

After that, the ways are requested for tourism that realize the needs for conservation or cultural preservation. Then the current tourism are divided into 4 types:

1) Tourism in natural resource is the tourism for relaxation, amusement and pleased about natural tourism.

2) Tourism that emphasis on culture, history and archaeology, which many places were built by human. Moreover, it concerns with social livelihood, and gives knowledge to the foreigner.

3) Tourism that responds deliration and satisfaction on relaxation, amusement and entertainment of tourists, they emphasis on appropriate services. This tourism is sport and entertainment tourism.

4) Tourism that there are objectives for convention and business. They may have observation and visual education. It is included in one type for tourism. This tourism is business and convention tourism.

2.1.2.2 Tourism Service

Service in tourism is one of the supplies that aren't the main target to tourists. But it is services to facilitate and entertain to tourists. Some occasions, they are attractions to the tourists including important tourism services i.e. lodging, food, souvenir center, entertainment center, activity center and other necessary constructions and facilities.

2.1.2.3 Tourism Market

Tourism market is a presentation of tourism demand that there are delirious on tourism from one place to other place, to participate in many activities, to practice in relaxation, and other activities. (Normally, tourism market emphasis on tourist.) Management process shall include promotion, development, and tourism service. In Thailand, the Tourism Authority of Thailand gave the meaning of some parts concerned as below:

1) Visitor refers to people who came from their residences for some objectives. They may stay overnight, or not (It's the total of tourists and excursionist).

2) Tourist refers to people who came to one place for many objectives, through it isn't for work or education. They aren't folk that have habitat, working and

education in these areas. They must stay overnight at least one night. (not more than 90 days) The objectives are to spend their free times for recreation, relaxation on holidays, health care, education-learning, religion, sport, business, visiting their relatives and convention, etc.

3) Excursionist refers to people who don't stay overnight. Domestic tourism is a travel of tourists both Thai and Foreign. They travel to provinces and their objectives not for work or education. They aren't folk who have habitat, working or study in provinces.

4) Tourist consumption expenditures mean expenditures for goods and services that they pay (International tourists) during their stays in Thailand (except international fares).

5) Tourism revenue means revenue that Thailand receives from foreign currency in directly and indirectly means. International tourism will generate revenue from goods fee and service fee.

6) Tourism is an activity depended on quality of human, resource and natural and cultural environment. It is separated from other economic development.

Tourism is important for economy system and can generate important revenue of Thailand. Although tourism industry got some effects during economic crisis, but it quickly recovered and it could alleviate economic crisis. So tourism was emphasised on economic dimension because of its benefits. Besides the expansion of tourism industry had effects on the natural environment both direct and indirect, as well as the social development.

2.2 Sustainable Development

2.2.1 Definition

The World Commission on Environment and Development defined sustainable development in the Brundtland Report (Our Common Future) as “a development which meets the needs of the present without compromising the ability of future generations to meet their own needs”. (WCED, 1987)

Sustainable development is “entails using, conserving, and enhancing the community’s resources so that ecological development possess, on which life depends, are maintained and the total quality of life, now and in the future, can be sustained”. (Martha Honey and Abigail Rome, 2001: 8)

Sustainable development is a broad political objective, encompassing an intention to avoid activities that will cause long term damage to the environment and a desire to ensure an adequate quality of life for present and future generations. Sustainable development involves economic, social and environmental dimensions. (SECA, 1999: 4)

The basic idea of sustainable development is implied in the context of natural resources (excluding exhaustibles) and environments; the use made of these inputs to the development process should be sustainable through time. If we apply the idea to resources, sustainability ought to mean that a given stock of resources: trees, soil quality, water and so on should not decline. (Pearce D.W, 1985: 2-12)

Sustainable development includes two key elements. One is the meeting of needs, and in particular the needs of those who have been left far behind in a century of extraordinary growth. The second element concerns the limits which world society must now impose to protect the resource base of our environment, both locally and globally. Therefore sustainable development imposes standards of consumption which must be met within the bounds of ecological possibility. (Brundtland G.H, 1989: 13-14)

Sustainable development is the management and conservation of the natural resource base, and the orientation of technological and institutional changes, in such a manner as to ensure the attainment and continued satisfaction of human needs for present and future generations. Such sustainable development (in the agricultural, fisheries and forestry sectors) conserves land, water, plant and animal genetic resources,

is environmentally non-degrading, technically appropriate, economically viable and socially acceptable. (FAO, 1992 : 75)

Analysing the use of sustainable and sustainability vary. However, there are three theories of definition. (Preecha Piemphongsan, 1995: 93-94)

- The social definition of sustainable development emphasizes the continual and basic need of human such as food, water and shelter. On the other hand, this definition also means the higher level of need such as stability, liberty, education, career, relaxation, prestige, and the contribution of the wealthy to mass populations. The aim and objective of the social definition are to maintain a high level quality of life and a long life.

- The eco-definition of sustainable development emphasizes the biological process of the natural environment, underlining the sustainability of the efficiency of the ecosystem in order to contribute to the longer life of the ecosystem. This eco-definition aims to protect biogenetic resources, preserve bio-diversity, and manage the ecosystem in order to secure the whole life cycle.

- The economic definition of sustainable development emphasizes the expansion of the economy. That is, sustainability means economic expansion in the sustainable growth rate. However, other green economists think that a sustainable economy emphasizes the ecosystem and the natural environment underlining the economic progression.

In summary, sustainable development is a development where current decision do not damage natural, social, economic and cultural prospects to maintain or improve living standards in the future.

2.2.2 Characteristics of the sustainable development

Brown et al.(1987) mentioned the specific characteristics of sustainable development as follows:

1. Sustain the continuing human kind to enable new borns to survive within a safe environment
2. An ensured stock of bio resources and continual agricultural production
3. An appropriate population growth rate
4. The ability to limit economic growth

5. Emphasis on small scale development and self reliance

6. The continual maintainance of the ecosystem and the quality of the environment

2.3 Sustainable Tourism

2.3.1 Definition

The World Tourism Organization (as quoted in Mc Kercher B., 2003: 4) defined sustainable tourism as “tourism which leads to management of all resources in such a way that economic, social and aesthetic needs can be filled while maintaining cultural integrity, essentials ecological processes, biological diversity and life support systems.”

Over the last 10 years sets of principles have been developed to try to operationalise the idea. These principles identify sustainable tourism as having four pillars economic, ecological, cultural and community sustainability. Various guidelines have been developed for each.

1. Economic sustainability - that is profitable in both the immediate and long term

- Form partnerships throughout the entire supply chain from micro-sized local businesses to multinational organisations
- Use internationally approved and reviewed guidelines for training and certification
- Promote among clients an ethical and environmentally conscious behaviour
- Diversify the products by developing a wide range of tourist activities
- Contribute some of the income generated to assist in training, ethical marketing and product development
- Provide financial incentives for businesses to adopt sustainability principles

2. Ecological sustainability - development that is compatible with the maintenance of essential ecological processes, biological diversity and biological resources

- Codes of practice should be established for tourism at all levels

- Guidelines for tourism operations, impact assessment and monitoring of cumulative impacts should be established
 - Formulate national, regional and local tourism policies and development strategies that are consistent with overall objectives of sustainable development
 - Institute baseline environmental impact assessment studies
 - Ensure that the design, planning, development and operation of facilities incorporate sustainability principles
 - Ensure tourism in protected areas, such as national parks, is incorporated into and subject to sound management plans
 - Monitor and conduct research on the actual impacts of tourism
 - Identify acceptable behaviour among tourists
 - Promote responsible tourism behaviour
3. Cultural sustainability - increase people's control over their lives and is compatible with the culture and values of those affected and strengthens the community identity
- Tourism should be initiated with the help of broad based community input
 - Education and training programs to improve and manage heritage and natural resources should be established
 - Conserve cultural diversity
 - Respect land and property rights of traditional inhabitants
 - Guarantee the protection of nature, local and the indigenous cultures and especially traditional knowledge
 - Work actively with indigenous leaders and minority groups to insure that indigenous cultures and communities are depicted accurately and with respect.
 - Strengthen, nurture and encourage the community's ability to maintain and use traditional skills.
 - Educate tourists about desirable and acceptable behaviour
 - Educate the tourism industry about desirable and acceptable behaviour

4. Local sustainability - that is designed to benefit local communities and generate/retain income in those communities

- The community should maintain control over tourism development
- Tourism should provide quality employment to community residents
- Encourage businesses to minimize negative effects on local communities and contribute positively to them
- Ensure an equitable distribution of financial benefits throughout the entire supply chain
- Provide financial incentives for local businesses to enter tourism
- Improve local human resource capacity

In June 1992, the 182 member countries of the United Nations held an environment and development conference called “Earth Summit” or “Rio Summit” which included development of “Agenda 21”. The definition of sustainable tourism products are products which operate in harmony with local environment, community, and cultures, so that these become the permanent beneficiaries. (www.welcomenepal.com)

Societe d’ Eco-amenagement (1994: 4) explained that sustainable tourism development is about keeping a balance between the needs of the visitor, the environment and the host community for current as well as future generations. Tourism can contribute to the three dimensions of sustainable development as follows:

- In economic terms, sustainable tourism development can improve the competitiveness of the enterprises, in particular SMEs, directly and indirectly related to tourism, and bring benefits to the local economy.
- In social terms, sustainable tourism development can enable at the same time to meet the needs and to encourage a responsible behaviour of the tourists, of the people working in tourism enterprises and of the local population.
- In environmental terms, sustainable tourism development can ensure the protection and rational management of natural and cultural resources.

Proposal of Robert Cleverdon and WTO (1999) explained “sustainable tourism development is the development that respond tourist’s deliration and also respond deliration of the owner of the areas and it has protection and conservation on many

locations of future humans. Furthermore, this tourism management mean tourism management that respond necessary on economic, social and beautiful scene. At the same time, it can preserve cultural, identity, and ecosystem of the place.” All of these, sustainable tourism concepts emphasize total tourism industry to adapt management condition to the world that has been changing limit of development covers all part of tourism.

2.3.2 Principles of sustainable tourism

From the Sustainable Tourism Indicators for Mediterranean Established Destinations studied by Yianna Farsari (2001), explained the principles of sustainable tourism as follows:

1. Using resources sustainably
2. Reducing over-consumption and waste
3. Maintaining diversity
4. Integrating tourism into planning and Marketing tourism responsibly
5. Supporting local economies
6. Involving local communities and Consulting stakeholders and the public
7. Training staff
8. Undertaking research

Among several of the principles of sustainable tourism there is a strong relationship. This is not surprising given the complexity of tourism, the interrelation in the different components of sustainable development and the need for holistic approach. In the following discussion some principles are examined jointly since they are conceptually interrelated, and similar indicators can be used in measuring sustainability. Thus, the principles of “Integrating tourism into planning”, and “Marketing tourism responsibly”, are examined together. This is also the case in the principles”, “Involving local communities” and “Consulting stakeholders and the public”.

Indicators are defined for the local scale of application. The scale of application is significant since more detailed information could be considered as it gets lower while aggregations are mostly used in a broader scale of application. Moreover, different indicators are meaningful at different scales although some of them could be used in

local as well as regional and/or national level. The local scale was chosen here in order to facilitate local communities and stakeholders to adopt sustainable practices. It is also believed that research in the local scale could help in clarifying theoretical as well as practical issues about sustainable development and facilitate in this way in its implementation.

The number of indicators varies from principle to principle according to the different dimensions this might have as well as the apparent lack of data or not. Data availability is a significant issue, especially in Mediterranean countries. For this reason, in some instances, more than one indicator may have been proposed which more or less refer to same parameter.

1. Using resources sustainably

As Hunter (1995 as quoted in Yianna Farsari, 2001) points out, “for renewable resources, sustainable development requires that the rate of utilization does not exceed the natural regenerative capacity”. Resources can be interpreted as natural (water, energy, landscape, biodiversity etc), cultural and social. This principle is part of what elsewhere is referred to as cultural or social sustainability.

For natural resources, water and energy are the key concerns for sustainability since both are extensively used by the tourism industry in the host areas, most often at rates far exceeding use by local population. Additionally, in the Mediterranean area these two resources are in scarcity and often are the object of conflicts due to competing demands for different uses. For renewable resources, recycling and/or regeneration rates are appropriate since they can be utilized to demonstrate some effort to manage consumption, as well as, emissions and littering. The indicator of water/energy consumption per tourist (or bed or night) is often suggested in the literature (WTO, 1993 and 1996 as quoted in Yianna Farsari, 2001) to measure key resource consumption. Although this measure could be utilized, particularly in situations where no other data are available and/or when strategies for consumption reduction have been implemented, such an index should be compared to:

- a) some standard norms of consumption;
- b) the relative redundancy of the resource in the region;
- c) the amount of resources needed by other sectors of the economy (agriculture, industry) which are developed or could be developed in the area (opportunity cost).

d) the consumption before the implementation of reduction policies

Landscape is another natural resource, to be considered. Over exploitation by the industry leads to deterioration of the landscape and the tourist. With large numbers of tourists visiting a beach, a park or other attractive site it should be expected that there would be loss of attractiveness, and disturbance of natural habitat because of the congestion and overuse. The large scale of infrastructure development also can limit the open space and dramatically alter the character of the area, the traditional ecosystems, the quality of life for the residents and of the experience for the visitors.

In most of the Mediterranean destinations the quality of bathing water is a major resource which should be considered as well. Measures such as continuous monitoring of water pollution, existence of some prize award (e.g. blue flag) or even number of locals swimming on a beach can be used to indicate the sustainable use of this resource. The list of indicators for resources at the local scale includes:

- Renewable resources (solar, wind, etc.) used in tourist accommodations as a percentage of total fuels used,
- Amount of water recycled as a percentage of total water that could be potentially recycled,
- Water/energy consumption per tourist (or bed or night),
- Square meters beach (park or other site) per tourist (average and peak),
- Square meters of open space per tourist,
- “Open” space as percentage to that built for tourism infrastructure,
- Existence of procedures for continuous monitoring of the swimming water,
- Number of samplings of swimming waters exceeding safe limits, as these are defined nationally or internationally,
- Quality of water expressed as concentration of various pollutants,
- Blue Flag award (or similar awards if existed),
- Number of locals swimming on the beach

It is difficult to measure directly social and cultural sustainability. This is because most of the variables related to these are qualitative rather than quantitative. Another reason is that cultural changes are inevitable when people from different socio-cultural background come together in some degree of interaction. Growth in tourism is only one part of the development process. Although it appears that tourism

accelerates cultural changes it is definitely not the only driving force of changes. Moreover, as Inskip (1991 as quoted in Yianna Farsari, 2001) claims the changes are not necessarily negative or undesirable.

An indirect measure for socio-cultural sustainability can be the involvement of local communities in the decision-making and other processes, along with the right information to tourists about the place they are visiting. These issues are examined in following principles. List of proposed indicators includes:

- Ratio of local population to peak season tourists,
- Ratio of local population to annual number of tourists,
- Marriages between tourists and locals as a percentage of all marriages,
- Number of bars/discos per local population,
- Divorces as a percentage of marriages,
- Females employed as a percentage of the labor force,
- Rate of growth of population,
- Unemployment rates in the off-season periods
- Local unemployment compared to Regional or National unemployment

2. Reducing over-consumption and waste

Reducing over-consumption and waste has a two-fold dimension; saving the resources used by tourism for the production/consumption of other goods and reducing the pressure on the environment resulting from the waste treatment and disposal. In this sense, the first component is somehow related to the first principle mentioned above.

Related to this principle is the existence and adequacy of the infrastructure and the methods used for the safe waste –solid and liquid- treatment and disposal. Adequacy relates to the capacity of the existing infrastructure to handle the waste generated and the right method of treatment.

For waste and wastewater production, what is important to measure is the existence of sustainable patterns rather than the amount of waste produced per sec. The low consumption patterns (increased efficiency, new technologies, responsible behavior)–adopted by both the industry and tourists-, as well as, recycling are indicators of responsible management and responsible tourists. They both lead to resources savings and a decrease in the cost –natural and in economic terms- of managing large amounts of waste. In case of existence of such methods the amount of waste per tourist can be used to indicate the effect. The indicators proposed are as follows:

- Percentage of materials which can be recycled and receive this kind of treatment,
- Percentage of water recycled,
- Number of hotels, restaurants and other places offering tourist services which have enacted environmental sound systems for eliminating over consumption of resources and waste generation as a percentage of all establishments,
- Readily available information for tourists and the industry in general for the adoption of low-consumption patterns,
- Solid/liquid waste generated per tourist,
- Percentage generated solid waste treated with the landfill method,
- Percentage generated solid waste in dump,
- Percentage of wastewater receiving treatment

3. Maintaining diversity

Diversity is a multifaceted aspect and includes biodiversity, socio-cultural diversity as well as, diversity in terms of products and recreations offered to the tourists.

Biodiversity is important but possible loss should be compared to that caused by other activities. Since some kind of development is decided there will be some loss in different fields, unless an area is left unspoiled and without intensive activities around. For developed resorts it is practically impossible to measure changes in biodiversity as a result of tourism since data on the conditions that existed before development are in most cases not available.

Maintaining diversity is mostly a consideration at the regional level. Biodiversity is apparent and common in a larger area, while the impacts on biodiversity are spread out on a broader spatial scale. However, the indicators could be used on a local scale too in order to have a measure of this parameter. Moreover, when the scale of application is not limited in the tourist area itself but on the broader area where local activity is taking place, is a wishing component that diversity indicators are included. Proposed indicators for the regional level:

- Number of special interest sites (natural, cultural) under protection Vs to those without any protection,
- Existence of legislation for species protection,
- Number of endangered/threatened species on the region,

- Monitoring of the number (e.g. ratio of species disappearance and/or Vs to the present numbers) and the patterns of species,

- Monitoring of the mobility patterns of the fauna

4. Integrating tourism into planning and Marketing tourism responsibly

Effective planning along with its marketing dimension and the focus on diversification needed can be used to rejuvenate and give a more sustainable future on the tourism product offered, the environment and the development in general. To determine indicators for planning we look on the three dimensions of planning in tourism, planning in the traditional sense, marketing and providing a diversified product for the tourists. Indicators for traditional planning include the existence of:

- Master plan for the development of the area/resort,
- Established procedures to monitor continuously the progress of tourism development,
- EIA procedures for analyzing the impact of new developments

Marketing is actually part of the planning process whose goals and objectives can be established locally, regionally or nationally. The way an area is marketed can influence perceptions, expectations and attitudes of the tourists before and after they reach their destination. With a responsible marketing, resort could be able to attract responsible tourists who fit the goals and objectives established for the area.

Diversification is related to sector's sustainability, as well as economic, sociocultural and ecological sustainability. Diversification should be examined in terms of:

- a) Who brings the tourists,
- b) The seasonality of tourism,
- c) The product offered,

Mass tourism -the predominant form of tourism in most Mediterranean resorts- and its reliance on few tour-operators may lead to an oligopoly which can limit substantially the profits for the host area and is not easy to be controlled locally or nationally. The number of different ways of distribution of the tourist product and the existence of local network of distribution are two proposed indicators. Seasonal diversification is an important aspect as well. The pressures paused on the environment because of the high tourist numbers in a limited time period and the seasonal and

non-career character of the jobs offered, are important considerations. On the other hand, the “winter” pause could be considered as positive since locals could have some time to strengthen their family and social bonds while ecosystems could also take a period of “rest”.

The need for diversification of the tourism product in order to restructure development appears to be essential. The new consumer culture with the increasing awareness about environmental quality, make apparent the need for new alternatives to be promoted in areas which have developed a massive and undiversified product so far. Proposed indicators:

- Tourists perception for the place they are visiting,
- Number of different products/activities supplied locally (historic-cultural tourism, sports based, conference, explorative tourism etc as well as recreational opportunities),
- Number of visitors and (and No of groups) in other than 3S places/activities comparing to total number of visitors,
- Percentage of hotels (or beds) operating during winter,
- Ratio of activities available in off season period to activities offered at peak time,
- Percentage of tourists arriving with charter flights vs total arrivals,
- Percentage of tourists having booked in three major tour operator,
- Number of tourists “moved” by independent tour operators vs those “moved” by large-scale mainstream tour operator,
- Percentage of tourists arriving with already booked accommodations vs total arrivals,
- Existence of legislation or zoning regulations determining the land use and the impregnated tourist areas,

5. Supporting local economies

In many areas in both developed and developing countries tourism has become the last 20 years one of the most significant economic activities. Employment growth and income generation are the two key economic benefits gained from tourism. Tourism is a labor-intensive sector that has direct, indirect and induced benefits on local incomes. On the other hand, tourism is an activity that may necessitate large amounts of investment, which usually are not available locally and have to be procured from abroad

or other parts of the country. As a result, it is possible to have excessive expropriation of profits from the business interests that invested and gradual loss of control over local economic activities. (Richards G, 1996 as quoted in Yianna Farsari, 2001)

Employment and income generation for local people, compared to similar indicators for other economic sectors, is one indicator for this principle. However, when the proportion attributed to tourism is unevenly high, this could indicate a non-sustainable pattern of development.

It is common that large number of the businesses offering tourist services belong to non-locals. Also non-locals may take many of the jobs. Additionally, a large share of the expenditures made by tourists may never reach the host community. Finally, a very significant contribution of tourism to the local economy is the increased demand for the local products, agricultural, crafts, products of small artisans etc. The only way of measuring this impact is through an input-output table that shows the interrelationships among the various sectors and the consumption patterns. Proposed indicators:

- Employment in tourism as a percentage of total employment,
- Number of “locals” employed in tourism as a percentage of total employment in tourism,
- Revenues generated by tourism as a percentage of total revenues generated in the area,
- Business establishments offering tourist services and owned by locals as a percentage of all business establishments,
- Income multiplier for the tourism sector as estimated in an input-output table,
- Revenues exported as a percentage of total revenues in the business establishments owned by foreigners

6. Involving local communities and Consulting stakeholders and the public

Involving local communities is examined along with the seventh principle “Consulting stakeholders and the public”, as they are actually expressions of the need for communication, information and experience exchange.

As McIntyre (1993 as quoted in Yianna Farsari, 2001) states, community involvement in tourism can reinforce positive impacts while mitigating negative ones,

as in this way residents understand tourism, participate in its decision-making and receive benefits from it.

Involvement of the local communities on the processes and the decision-making of tourism can better ensure locals' positive attitude to tourism as well as their commitment to developmental goals –where these later exist. As Bramwell and Henry (1996 as quoted in Yianna Farsari, 2001) points out consultation of all stakeholders is essential if they are to work alongside each other.

Local participation is also interrelated with educational elements, such as informing local communities for the processes and the impacts of tourism. Although, in already developed resorts it is likely that the host community will have some experience, it is important that they have the right information about the needs for the long-term impacts and the long-term viability of the industry. Proposed indicators:

- Existence of educational/informational programs for the public,
- Number of local meetings to discuss issues before policies are implemented,
- Availability of procedures for public and stakeholders involved to suggest changes in policies,
- Public-private partnerships/investments

7. Training staff

Training and continuous education is important for the improvement of the tourism product offered. This later is important in its turn, for developed areas facing some stagnation or decline in their product.

There is a need for continuous training in every type of job related to tourism, from cooks to higher managers. Better quality, greater productivity, increased effectiveness, introduction of new technologies and environmental extensions should be some of the subjects to be worked on.

The training element is better reflected at the regional level or even more at a national level. Indicators, such as availability of vocational courses offered on tourism services, are more meaningful when measured regionally. It is not expected that each resort will organize courses while it is expected that in a broader area courses will be available for people from around the region.

Therefore this principle is better examined in a regional scale. However, in order

to have some kind of indication for the training element the indicators of a broader region could be used indicatively of the situation. An indicator for the local scale is:

- Number of short-term courses realized locally concerning tourism

However it is better reflected in a broader scale. Proposed indicators for this are:

- Attendance in short term courses per 1000 employees,
- Percentage of employees that are graduates of tourist schools,
- Initiatives by the public sector and/or the industry for training,
- Availability of short-term courses per 1000 tourists,
- Diversity of courses offered,
- Graduates of tourist schools per 1000 tourists

8. Undertaking research

“Governments, industry, authorities, and tourism-related NGOs should promote and participate in the creation of open networks for research, dissemination of information and transfer of appropriate knowledge on tourism and environmentally sustainable tourism technologies” (W.T.O. & U.N.E.P., 1998)

Tourism is similar to other economic sectors in that on-going research and monitoring using effective data collection and analysis techniques is essential to help solve problems, create new products, make efficient use of the resources, better implement sustainable development in practice.

Several issues of tourism and sustainability research are common in more than one resort. Furthermore, there are many implications that cross the narrow local boundaries and expand in a broader area. Therefore, it is expected that research will likely take place in a regional scale –or even more in a national scale.

However, the following indicators could be used at the local level as well in order to reflect the local commitment to sustainable development principles. Proposed indicators:

- Number of surveys made concerning tourist preferences and perceptions,
- Number of surveys made concerning locals perceptions for tourism,
- Number of research studies on the profitability of the industry / number of research studies on the impacts of tourism,
- Conferences and other activities attracting interest in tourism research organized locally

2.4 Tourism Impact to Environment

Edward Inskeep (1991: 339-347) explained that tourism can generate either positive or negative environmental impacts, or no appreciable impacts. Depending on how its development is planned and managed. The most commonly accepted types of impacts are reviewed in the following sections. There may be additional or more specific impacts in particular tourism development areas.

2.4.1 Positive impacts

Tourism, if well planned and controlled, can help maintain and improve the environment in various ways.

2.4.1.1 Conservation of Important Natural Areas

As has been previously emphasized, tourism can help justify and pay for conservation of important natural areas and development of parks and reserves, including the establishment of national and regional parks because they are attractions for tourists. Without tourism, these natural areas might be developed for other uses or allowed to ecologically deteriorate, with a consequent loss of environmental heritage. This factor can be an especially important benefit in countries that have limited resources for nature conservation.

2.4.1.2 Conservation of Archaeological and Historic Sites and Architectural Character

Tourism provides the incentive and helps pay for the conservation of archaeological and historic sites (as attractions for tourists) that might otherwise be allowed to deteriorate or disappear, thus resulting in the loss of the cultural heritage of areas.

2.4.1.3 Improvement of Environmental Quality

Tourism can help provide the incentive for 'cleaning up' the overall environment through control of air, water, and noise pollution, littering, and other environmental problems, and for improving environmental aesthetics through landscaping programs, appropriate building design, sign controls, and better building maintenance.

2.4.1.4 Enhancement of the Environment

Although a more subjective benefit, development of well-designed tourist facilities (for example, attractive, landscaped hotels) may enhance rural or urban landscapes that are otherwise dull and uninteresting.

2.4.1.5 Improvement of Infrastructure

An economic as well as environmental benefit, local infrastructure of airports, roads, water, sewage, and solid waste disposal systems and telecommunications can be improved through the development of tourism, which uses and helps pay for the infrastructure, thus leading to an overall reduction of pollution problems and an enhancement of the environmental quality of areas. Water resource management may also be improved through development of tourism because of its demands for additional water supplies.

2.4.1.6 Increasing Environmental Awareness

In places where residents have limited interest in and concern about the natural environment and its conservation, observing tourists interest in nature and realizing the importance of conservation to the economic success of tourism can encourage local awareness in this subject.

2.4.2 Negative impacts

The various types of negative or undesirable environmental impacts that can be generated by tourism development if it not carefully planned, developed, and managed include those listed below. Not all these impacts would likely take place in one area because the types of impacts often depend on the kind of tourism development and the specific environment in relation to the carrying capacity of the environment greatly influences the extent of environmental impact. Many of the types of impacts considered here can result from various types of development, and most are not unique to tourism.

2.4.2.1 Water Pollution

If a proper sewage disposal system has not been installed for hotels, resorts, and other tourist facilities, there may be pollution of ground water from the sewage, or if a sewage outfall has been constructed into a nearby river, lake, or coastal sea water and the sewage has not been adequately treated, the effluent will pollute that water area. This is not an uncommon situation in beach resort areas where the hotel has constructed

an outfall into the adjacent water area that may also be used by tourists for swimming. Surface water pollution in rivers, lake, and sea spilling oil and gas and cleaning their bilges into the water, especially in enclosed harbors and places where natural water circulation is slow.

2.4.2.2 Air Pollution

Tourism is generally considered a 'clean industry', but air pollution from tourism development can result from excessive use of internal combustion vehicles (cars, buses, and motorcycles) used by and for tourists in particular areas, especially at major tourist attraction sites that are accessible only by road. Often compounding this problem are improperly maintained exhaust systems of the vehicles. Also, pollution in the form of dust and dirt in the air may be generated from open, devegetated areas if the tourism development is not properly planned, developed, and landscaped or is in an interim state of construction.

2.4.2.3 Noise Pollution

Noise generated by a concentration of tourists, tourist road and off-road RVs such as dune buggies and snowmobiles, airplanes, motor boats, and sometimes certain types of tourist attractions such as amusement parks or car/motorcycle race tracks may reach uncomfortable and irritating levels for nearby residents and other tourists. Very loud noise can result in ear damage and psychological stress.

2.4.2.4 Visual Pollution

Visual pollution may result from several sources:

- Poorly-designed hotels and other tourist facility buildings that are not compatible with the local architectural style and scale or well integrated into the natural environment;
- Use of unsuitable building materials on external surfaces;
- Badly planned layout of tourist facilities;
- Inadequate or inappropriate landscaping;
- Use of large and ugly advertising signs;
- Overhead utility (Electric and telephone) line and pole;
- Obstruction of scenic views by development; and
- Poor maintenance of buildings and landscaping.

As indicated below, littering of the landscape also results in visual pollution.

2.4.2.5 Waste Disposal Problems

Littering of debris on the landscape is a common problem in tourism areas

because of the large number of people using the area and the kinds of activities, such as picnicking, that they engage in. Improper disposal of solid waste from hotels, restaurants, and resorts can generate both litter and environmental health problems from vermin, disease, and pollution as well as being unattractive.

2.4.2.6 Ecological Disruption

Several types of ecological problems can result from uncontrolled tourism development and use. Overuse of fragile natural environments by tourists can lead to ecological damage (for example, killing or stunting the growth of vegetation in parks and conservation areas by many tourists walking through them and compacting the soil around the vegetation, trees being cut hikers and campers for use as fuel to make campfires, and erosion resulting from overuse of hiking and riding trails in steep-sloped areas).

2.4.2.7 Environmental Hazards

Poor land use planning, siting, and engineering design of tourist facilities, as well as any type of development, can generate erosion, landslides, flooding, and other problems.

2.4.2.8 Damage to Archaeological and Historic Sites

Overuse or misuse of environmentally fragile archaeological and historic sites can lead to the damage of these features through excessive wear, increased humidity, vibration, vandalism, and graffiti writing.

2.4.2.9 Land Use Problems

If not well developed according to sound land use planning principles, tourism development can result in land use problems. Tourist facilities may preempt land that is more valuable for other types of land uses, such as agriculture and parks, or that should remain under strict conservation control. Facilities may take the form of 'ribbon' or linear commercial development, which is inefficient to serve with infrastructure, generates dangerous traffic conditions, and can be visually ugly. Vacation home development can lead to problems of urban sprawl. Hotels may be constructed too close to beaches or other attraction features, thus detracting from those features. Without integrated land use and infrastructure planning, the infrastructure may become overloaded, leading to traffic congestion and insufficient water supply and sewage disposal systems.

2.5 Tourism Certification

2.5.1 Background

While tourism itself is thousands of years old, tourism labelling, awards and certification on environmentally and socially responsible standards have only been around for little more than a decade. Today, there are scores of tourism certification programs around the world, certifying tourism professionals, i.e., individuals, as well as businesses, attractions, destinations, or services. Because the field of socially and environmentally responsible certification is so new, what are viewed as the “pioneering” or “ground-breaking” programs date only from the late 1980's or early 1990's. Most of these certification programs started in the late 1990's, but the groundwork for them has been laid over the last three decades.

During the past 30 years, global concern has gradually grown over sustainable development and how to create an integrated approach to industrial development, including tourism. In the 1970's, many governments, at both the national and local levels, began passing laws that required companies to comply with regulations for environmental impact and emissions, particularly into the air and water. In the 1980's, a few companies tried to go “beyond compliance,” using technologies and practices that exceeded government requirements. Some business leaders also took a longer view, supporting the concept of sustainable development. As articulated in the 1987 Brundtland report, sustainable development is that which “meets the needs of the present without compromising the ability of future generations to meet their own needs.” At its best, the concept of sustainable industrial development means that businesses contribute to the “triple bottom line” of sound and responsible economic, social, and environmental behavior. (Krut and Gleckman, 1998:109 as quoted in Martha Honey and Abigail Rome, 2002: 15)

The 1992 United Nations Conference on Environment and Development (UNCED) or so-called Earth Summit held in Rio de Janeiro provided an important impetus for a variety of efforts to “green” industries through voluntary compliance, governmental regulation, and international treaty. The Earth Summit's Agenda 21, approved by 182 countries, laid out a broad path and challenge for business to adopt the principles and practices of sustainable development.

Regarding the travel and tourism industry, Earth Summit organizer Maurice Strong stated, “Without a clean and healthy environment, travel and tourism cannot retain its role as world leader, businesses cannot thrive, and destinations will continue to be abandoned. To enjoy success, the industry needs to embrace the concept of sustainable development and make it a reality in the next century.”

In the wake of the Earth Summit, a number of new tourism certification programs were started with the aim of measuring environmentally and socially responsible practices. Currently, certification of products in the field of tourism is getting another boost in meetings leading up to 2002, which the United Nations’ declared “International Year of Ecotourism,” as well as the tenth anniversary of the Earth Summit. But while certification has been thrust forward by these international events—the Earth Summit and the Year of Ecotourism—it is also an outgrowth and logical next step in the evolution of efforts to “green” the tourism industry as a whole and to build a movement for sustainable tourism and ecotourism. Before 1970, little attention was given by companies, governments, or NGOs to environmental and social impacts of the travel and tourism industry. The oldest tourism and hospitality industry programs certifying facilities—Michelin, whose first travel guide to France came out in 1900 and the Automobile Association of America (AAA)'s travel guides that began shortly afterwards—catered to motorists. They measured and rated cost and quality of services and facilities, not their environmental and socio-economic impacts.

By the early 1990's, there were, as well, some dozen programs in the United States to certify tourism professionals. The oldest program, the Certified Travel Counselor (CTC), was introduced in 1965 by the Institute of Certified Travel Agents as a voluntary program to rate and recognize the competence of individual travel agents. Other programs certified a range of professionals within the tourism and travel industry, including hotel administrators, tour professionals, meeting professionals, hotel sales executives, festival executives, incentive travel executives, and exhibit managers. By the early 1990's, the number of similar programs was growing in Canada and Europe as well. This type of certification program was designed to demonstrate professional competence and performance and to promote self-assessment and improvement. While the programs helped to attest for the integrity of individuals, they were not linked to setting or measuring environmentally or socially responsible criteria for the industry.

Further, as will be elaborated later, they are all second-party certification programs, i.e., ones run by industry trade associations. As such they cannot be considered independent evaluations by impartial auditors. As one analyst put it, the danger is that these industry-run certification schemes are “more interested in creating an additional source of income and members than in advancing their professions”. (Morrison, 1992 as quoted in Martha Honey and Abigail Rome, 2002: 15)

2.5.2. Methodology: Process vs. Performance

Martha Honey and Abigail Rome (2002: 33) explained that these different categories of stakeholders, each with their distinct interests, have helped to spawn different types of certification programs. Broadly stated, tourism certification programs can be divided into two methodologies:

- 1) process-based using environmental management systems, or
- 2) performance-based using environmental and usually socio-cultural and economic criteria, standards, or benchmarks.

In many ways, both these methodologies are implemented similarly: both can involve first-, second- or third-party audits and both award logos for those that achieve certification. However, understanding the process vs. performance distinction is vital to any analysis of the integrity of certification programs within tourism and travel, as well as those in other industries. As one recent study suggests, “For the credibility and effectiveness of tourism certification schemes, both consumers and the travel and tourism industry must understand and recognize this process-performance distinction”. (Synergy, 2000) It is a conclusion of this study that, to date, effective certification within the travel and tourism industry has been hampered because many of the older and larger programs are wholly or largely process-based and therefore award certification to companies when they set up an environmental management system, rather than when that system is implemented. They are unable to guarantee that companies are performing in environmentally and socially responsible ways. There is a growing awareness of the short comings of this methodology and recognition that, to be credible, certification programs must be largely performance-based, i.e., must entail compliance with a set of externally determined standards that are used to measure all companies, services, or products.

2.5.2.1. Process-based Programs

Environmental Management System (EMS)

The process-based certification programs are all variations of environmental management systems (EMS). The EMS method has become a popular tool in helping management conduct baseline studies, put together a program plan, do staff training, and set up systems for on-going monitoring and attainment of set environmental targets such as pollution, water, and electricity reduction. It seeks to answer the following five questions:

- Where are we now, with respect to the environment?
- Where do we want to go?
- How will we get there?
- Are we getting there?
- Is it still where we want to go? (Wildesen, 2000 as quoted in Martha Honey and Abigail Rome, 2002: 23)

Moreover, in a world where environmental problems are a growing concern, ISO 14001 and EMAS will help organisations to comply with current and future legislative requirements. The main similarity between ISO 14001 and EMAS is that they require an Environmental Management System (EMS). The environmental management system must include an environmental policy and evaluation of environmental effects. Goals and responsibilities must be established, resources allocated, performance monitored and corrective action taken as and when required. (Assembly of European Regions, 1998: 23)

a. Eco-Management and Audit Scheme (EMAS)

The Eco-Management and Audit Scheme (EMAS) was launched following European Community legislation that required all member states to introduce a scheme for managing and reporting their environmental performance. Its aim is to increase the use of market based mechanisms, rather than legislation, to improve environmental performance. EMAS only applies across the European Community whereas ISO 14001 can be applied anywhere in the world.

In order to be recognised as complying with EMAS, companies are required to write an environmental statement on a site by site basis and have it validated by a third party. The purpose of the statement is to ensure that the public and other interested

parties understand the environmental impact of the site and how it is being managed. It has to be made publicly available and written to take into account the requirements of all stakeholders, staff, investors, regulators and local communities.

Currently, EMS is being widely used within the tourism and travel industry. Many of the larger and better known tourism certification programs—including Green Globe and IHEI (International Hotels Environment Initiative)—have embarked on certification programs based on an environmental management system. (A number have recently incorporated performance standards as well.) EMS helps businesses find a systematic way to incorporate and integrate environmentally-sensitive procedures into their service process, to identify and control environmental impacts and risks, to recognize environmental opportunities, and to improve their images and competitiveness. (Fematour, 2000 as quoted in Martha Honey and Abigail Rome, 2002: 24).

The International Hotel Association, for instance, published the Environmental Action Pack: Practical Steps to Benefit Your Business and the Environment for the American Hotel & Motel Association. (International Hotel Association, 1996 as quoted in Martha Honey and Abigail Rome, 2002: 24) Addressed to hotel managers, it states that its aim is “to help you introduce environmental management as an extension to the daily operation of your business.” It emphasizes that the EMS should be tailored to the needs of each hotel: “Manage it at a pace which is right for your hotel, and bring it into your normal working schedules from now on.” This guide includes a “Green Health Check” covering six areas: 1) energy, 2) solid waste, 3) water, 4) effluents and emissions, 5) purchasing, and 6) business issues. Managers are asked to answer a list of yes/no questions in each category and if the score is five or more, the hotel is rated as performing well; four or less, “you may need to consider that area as a priority for action.” Many items are also cost-saving measures, as can be seen from the check list for energy:

Environmental Checklist: Energy

- Does the staff switch off appliances & lighting when not in use?
- Are energy services shut down when & where parts of the building are unoccupied?
- Have temperature settings, timers, lighting levels, etc., been adjusted to ensure minimum energy use for given comfort levels?

- Is hotel energy use regularly monitored?
- Is consumption of energy going down year to year?
- Have targets for reducing energy consumption been set?
- Has energy use been compared with energy benchmarks?
- Have you checked that the cheapest fuel rate is being used for each purpose?
- Is all of your energy plant/equipment less than 10 years old?
- Have low-energy lights been fitted where cost-effective?
- Has an energy audit been undertaken in the last three years?

An EMS system is considered to be officially implemented only if it complies with EMAS (Eco-Management and Audit Scheme), ISO 14001, or the British adoption of ISO, British Standards BS7750. Around the world, ISO has become the most popular EMS system. (Martha Honey and Abigail Rome, 2002: 25)

b. Environmental Management Standard ISO 14001

Martha Honey and Abigail Rome (2002: 25) explained the International Organization for Standardization (ISO) is a world federation founded in 1946 and based in Geneva, Switzerland to facilitate international inter-firm trade. It is composed of 111 national and regional standard-setting bodies that develop voluntary standards designed to facilitate international manufacturing, trade, and communication.

Environmental Management Systems Standards ISO 14001 is the part of Environmental Management Standards ISO 14000 series. Technical Committee 207 (TC-207) of the International Organization of Standardization to use to manage business that causes harmful effect to environment. (Tewin Sirichoechaikul, 1996: 2) ISO 14000 consists of several standards that can be classified in to 3 groups, management systems standards, evaluation and measurement standards, and product standards. ISO 14000 families depict in diagram down below.

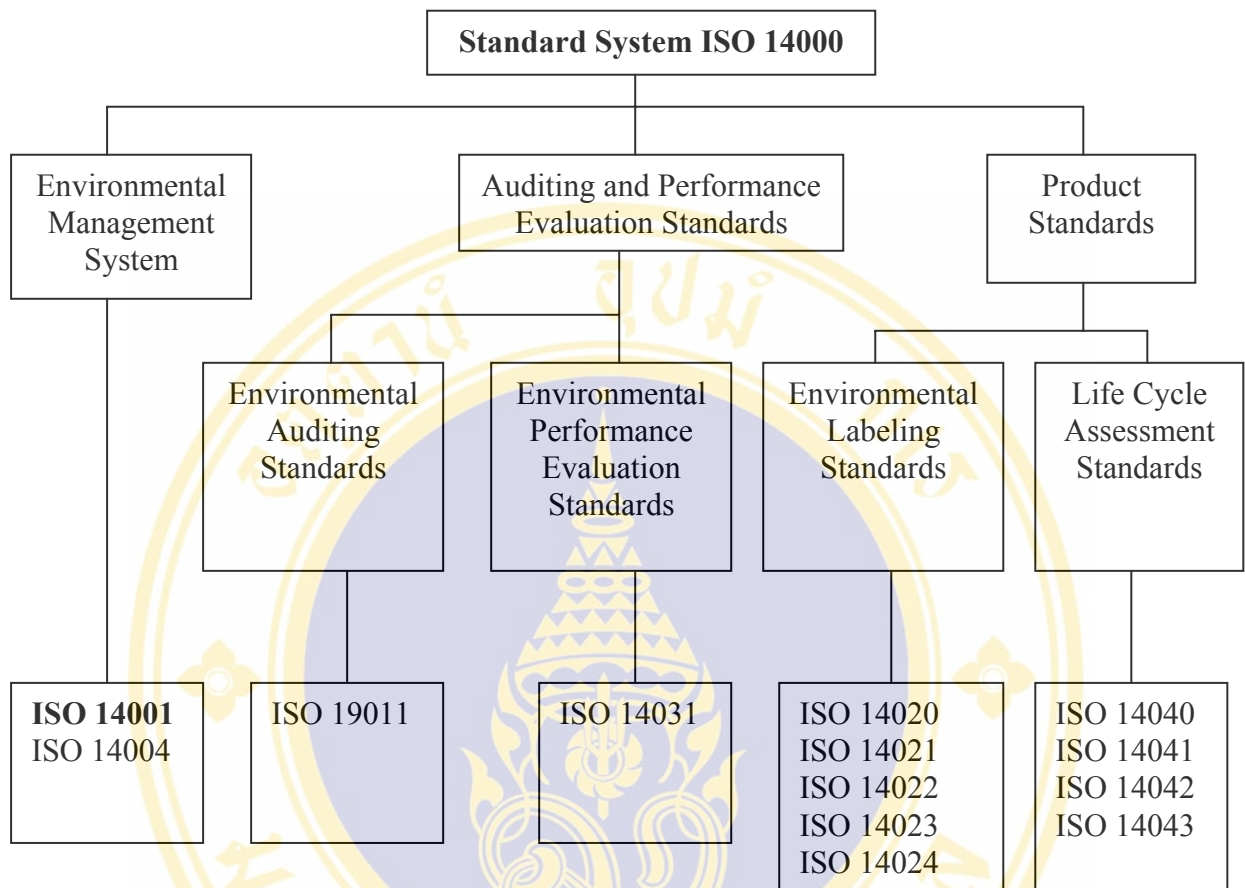


Figure 2.1 ISO 14000 series

Source : Thai Industrial Institute: 2004

Each standard is classified into several sub-standard systems according to its duty (Sayam Arunsrirakot, 2000: 6-1 - 6-2) as followings.

1. Environmental Management Systems (EMS) is standards for controlling environmental management of an organization on policy, planning, operation plan, auditing and reviewing to improve system. They are :

ISO 14001 specifies requirement on Environmental Management System to the extent that an organization can request for the certificate.

ISO 14004 provides guidance on principles and technique to implement Environmental Management Systems ISO 14001.

2. Auditing and Performance Evaluation Standards

2.1 Environmental Auditing Standard (EA) specifies procedures for conducting environmental audits, that is:

ISO 19011 : 2002 Guidelines for quality and/or environmental management system auditing that are guidelines for audit, management audit program, audit activity, compliance and to estimate for auditor that every organization can use it for internal audit. This standard it had been modified from Environmental Management System ISO 14010 : 1996, ISO 14011 : 1996, ISO 14012 : 1996 and replace from Quality Management System ISO 1011-1 : 1990, ISO 1011-2 : 1991, ISO 1011-3 : 1991

2.2 Environmental Performance Evaluation Standards (EPE) provides tools to assist a business unit to set up its own internal evaluation system to audit performance and environmental operations, and support environmental management system of that business unit. The business unit must arrange an appropriate indicator, which is

ISO 14013 provides general principles of performance evaluation on pollution control operations.

3. Product Standards

3.1 Environmental Labeling Standards (EL) describes the general requirement for a product to label an environmental product.

ISO 14020 provides fundamental principles to label and environmental product

ISO 14021 defines usage of environmental product label by procedures.

ISO 14022 describes symbols for environmental product labeled by procedures.

ISO 14023 describes procedures to audit and certify products to labeled.

ISO 14024 specifies principles for operation, requirements and procedures to certify environmental products of the certification unit.

3.2 Life Cycle Assessment Standards (LCA) provides guidelines to determine impact of product on the environmental from raw materials to disposal stage.

ISO 14040 provides fundamental principles and operational framework.

ISO 14041 complies information on environmental as well as product life cycle.

ISO 14042 provides guidance to assess impact on environment through entire product life cycle.

ISO 14043 provides guidance to interpret the assessment results.

4. Environmental Management Vocabulary Standards provides meanings term of use in Environmental Management Systems ISO 14000 which is

ISO 14050 complies vocabulary and definition on Environmental Management.

Implementation ISO 14001: 2004 for organization

The organization every types, sizes provide to SMEs that to transaction industrial have to purpose to implementation ISO 14001 and certifies this standard. The organization to proceed and improve environmental management follow up to requirement of ISO 14001 that are:

1. General requirement studied and understand ISO 14000 series and establish committee to implement ISO 14001. Proceed to review situation of transaction, industrial or organization in environmental management.

2. Environment policy define by top management. The policy shall include a commitment to achievement to proceed for guidance to person working for organization.

3. Planning for achieve environment policy, that plan will be cover composition that are:

3.1 Environmental aspects of its activities, products and services to environmental effects and provide activities have significant impacts on the environment.

3.2 Legal and other requirements the organization to identify and have access legal and other requirement that organization have related

3.3. Objectives, targets and programme (s) The organization shall establish that have to effects to environment impacts for achieving its objectives and targets.

4. Implementation and Operation

4.1 Resources, Roles, Responsibility and authority for environmental management to implement, maintain and improve environmental management system.

4.2 Competence, Training and Awareness for person who working for organization have potential and competent on basis of appropriate education, training or experience to work for organization.

4.3 Communication to internal and external organization

4.4 Documentation for control environment impacts.

4.5 Control of documents shall control document to adequacy, update, available at point of use and necessary.

4.6 Operation control for achieving its objectives targets and programmes.

4.7 Emergency preparedness and response shall establish, plan for emergency situation and practice for emergency plan in suitable period.

5. Checking

5.1 Monitoring and measurement shall establish, implement and maintain a procedures to monitor and measure, on a regular basis, applicable operational controls and conformity with the organization environmental objectives and targets.

5.2 Evaluation of compliance consistent with its commitment to compliance, evaluating compliance with applicable legal requirements.

5.3 Nonconformity, corrective action and preventive action shall establish, implement and maintain a procedure for dealing with actual and potential nonconformity and for taking corrective action and preventive action.

5.4 Control of records shall establish and maintain records as necessary to demonstrate conformity to the requirements to environment system and this International Standard, and the results achieved.

5.5 Internal Audit shall ensure that internal audits it the environmental management systems are conducted at planned.

6. Management Review Top management shall review the organization environmental management system, at planned intervals, to ensure its continuing, suitability, adequacy and effectiveness. Review shall include assessing opportunities for improvement and the need for changes to the environmental management system, including the environmental policy, objectives and targets.

The ISO 14000 series is one of several industry responses to the increasing public interest in sustainable development that came in the wake of the 1992 Rio Earth Summit. While ISO 14000 is a family of standards, ISO14001 contains an EMS standard against which a business, regardless of its size, product, service, or sector, is certified. It can be used by tourism companies or any other type of business and can be applied corporatewide, at a particular site, or to one particular part of a firm's operations. The exact scope of ISO 14001 is up to the discretion of the company. (Martha Honey and Abigail Rome, 2002: 25)

An ISO 14000 environmental management system includes five elements:

- An environmental policy
- An assessment of environmental aspects and legal and voluntary obligations

- A management system
- A series of periodic internal audits and reports to top management
- A public declaration that ISO 14001 is being implemented

Certification to ISO 14001 means that a company's environmental management system conforms to the specifications of the standard, as verified by an audit process. ISO does not do auditing; it simply facilitates the development of EMS standards. Businesses often elect to use an independent firm not connected to the industry because an EMS audit confirmed by a qualified, neutral third party will have more credibility. However, certification to ISO standards is based on having an acceptable process for developing and revising the EMS; it is not based on implementation of the EMS. Once a company is certified and registered to an ISO standard, it receives a certification that is valid for a maximum of 3 years.

A number of individual hotels and hotel chains (such as the Spanish chain Sol Melia Hotel) have set up certification programs based on ISO 14001. Several of the largest global certification programs as well as some in Europe (including Green Flag for Green Hotels) are based on or have incorporated some of the ISO 14001 standards. By 1998, however, only 16 hotels had been certified under the ISO 14001 program, including 13 in Germany, Portugal, and Sweden and three in Hong Kong and Mauritius; three more were in the application stage.

Proponents of ISO contend it has the advantage that it is versatile and can be used across industries and with different industry sectors. Critics argue this is a drawback because it is too broad to accurately measure the environmental, economic, and socio-cultural impacts of different businesses and industries. And there are other problems as well. One is its high cost. According to one study, ISO 14001 certification, not including compliance, runs between \$500 and \$15,000, making it prohibitively expensive for all but the largest hotels. (Hagler Bailly, 1998:11,13 as quoted in Martha Honey and Abigail Rome, 2002: 27) Certification expert Robert Toth explained in an interview that the real cost, if travel, staff training, and consultation is included, is between typically \$20,000 and \$40,000 for a medium-sized company. In addition, the ISO process is complicated and heavily engineering oriented, it contains no social or economic standards and the audit for ISO 14001 certification produces an internal document intended for senior management, not for the public. Further, because it

measures process, not performance, what a business does is not important, only how it does it. Krut and Gleckman (1998: 8, 16 as quoted in Martha Honey and Abigail Rome, 2002: 27) noted “Following this logic” and “a company making weapons for biological warfare can be certified to ISO 14001”. Because ISO 14001 allows a company to draw up its own environmental policy against which its management system is designed, a company may become certified based on a weak or narrowly defined policy. There is no requirement under ISO 14001 for a company to exceed existing laws should these regulations be deficient. It is possible, as well, for a company to meet ISO requirements and gain certification, while at the same time it is in litigation and in conflict with environmentalists and local communities.

Today within the field of tourism certification, debate continues around ISO 14001, with efforts on some fronts to have it adopted as the standard both in Europe and worldwide. However, we concur with those who argue that this is an error. ISO 14001 and other process-based management systems are insufficient, by themselves, to generate sustainable tourism practices. In addition, they don't fully meet consumer needs: EMS focuses on “gray” environmental characteristics—consumption of water and energy and waste disposal, for example—while surveys show that tourists are more interested in “green” environmental aspects in the surrounding areas, such as beautiful and pristine surroundings, clean and healthy air and water, and peace and quiet. To be marketable, a major European study found, certification programs and eco-labels must add in and evaluate consumers’ broader green concerns. (Fematour, 2000 as quoted in Martha Honey and Abigail Rome, 2002: 27) In addition, it will be argued in subsequent sections, certification programs must also include criteria to assess the social, cultural, and economic impacts on the host community if they are to measure sustainable development.

In sum, the ISO and other forms of process-based certification have the advantage that they fit well with how large companies are organized, can operate globally, and can be used across tourism sectors. However, drawbacks to the ISO-type management systems approach include:

- they are less applicable to small business, which make up an estimated 97% of the travel and tourism industry;
- the environmental aspects they address may ignore those that are important to host communities, to conservation, and to tourists;

- they can permit a company to earn a logo for setting up a management system, even though its performance record may be less sustainable than that of other companies; and,
- their path to implementation and certification is not self-evident, resulting in additional expenses to hire consultants and trainers.

Such criticisms have spurred the development of a number of other programs that seek to combine some performance criteria with a process-based environmental management system. Several are being used in tourism certification schemes, particularly in Europe. (Martha Honey and Abigail Rome, 2002: 28)

2.5.2.2 Performance-Based Programs

Martha Honey and Abigail Rome (2002: 30-32) explained that performance-based programs use a set of externally-determined environmental and usually socio-cultural and economic criteria or benchmarks to measure all companies seeking certification. Today, an increasing number of programs are performance-based, or are a combination of both process and performance methodologies. Performance based systems are used mainly by national or sub-national certification programs to compare and judge businesses against a set of common criteria. In most cases, an independent auditor is contracted to inspect products and services to ensure that the criteria are met. If so, the business or product is awarded a logo that may have several different levels in order to indicate current status and to encourage improvement in fulfilling more or higher criteria.

Costa Rica's Certification for Sustainable Tourism (CST) program, for example, has developed a complex scoring procedure that, Costa Rican officials say, helps to promote improvement. CST includes criteria in four different areas: 1) physical and biological environment, 2) infrastructure and services, 3) external clients, and 4) socio-economic environment. There are a total of 153 yes/no questions divided among these four areas.

Each question, in turn, is weighted in importance from one to three, with three the most important. For example, one of CST's questions in its socio-economic environment category asks whether the hotel has a private reserve. If the respondent says yes, two points are awarded. In the survey, the question appears as follows:

The hotel has a private reserve?

Weight	Compliance	Non-Compliance	Does Not Apply
2	YES	NO	N/A

The total points received in each category are then calculated, translated into a percentage, and then given a rating level of sustainability based on scale of zero to five. This is similar to the traditional “star” rating given for hotels. The accommodation's final score equals the lowest rating received in the four different areas. For example, a hotel may be rated 3, 2, 4, 3 in each of the areas, but its overall rating and logo will be a level 2. There is, therefore, a clear incentive for the business to improve in this second category of infrastructure and services in order to raise its rating the next time it is audited.

Costa Rica’s certification for sustainable tourism

Level of sustainability	Minimum % of compliance for all four general areas
0	<20%
1	20-39%
2	40-59%
3	60-79%
4	80-94%
5	>94%

In Europe, the Blue Flag program has two sets of criteria for certifying beaches and marinas. One set contains the “essential” criteria for certification, and the other contains “guidelines” or desirable criteria. Since Blue Flag is an international program that is implemented nationally, the international Blue Flag management requires that all applicants satisfy the first set, and leaves it up to national implementers to determine which of the second set are necessary. The criteria for beaches fall into three categories: 1) water quality, 2) beach management and safety, and 3) environmental information and education. (UNEP, WTO, FEEE, 1996) Blue Flag provides detailed discussions for all the criteria, as well as check lists, such as:

Blue Flag Water Quality Check List

Essential:

- Microbiological monitoring
- Public display of water quality data
- No discharges affecting beach
- Compliance with official plans & legislation
- No visible pollution

Guideline:

- Plans for pollution accidents
- No decaying vegetation

Performance standards (often on several levels) help to encourage businesses to invest in technologies that give the greatest economic and environmental benefits both to their enterprises and to the wider community in which they are situated. Such programs can be scaled according to size and complexity of the product or company, and can therefore be more easily applied and managed by small and medium sized enterprises. Increasingly, however, many of the newer or revamped programs represent a hybrid of process (management systems) and performance (standards or benchmarks).

2.5.3 Types of Certification Programs: Mass Tourism, Sustainable Tourism & Ecotourism

As outlined above, a central division among tourism certification programs is between two distinct methodologies: environmental management systems based on process and externally-determined criteria or standards based on performance. While this process performance distinction is extremely important, certification programs can be categorized with a wider lens than methodology. In terms of developing public policy, model programs, international standards, and accreditation systems, it is helpful to define three fundamental types of certification: tourism, sustainable tourism and ecotourism certification.

2.5.3.1 Mass Tourism Certification

These are certification programs that cover companies within the mass market or conventional tourism industry. They are based on setting up environmental management systems (often ISO 14001 or their derivatives) tailored to the individual business and outlining the steps to be taken to achieve certification and a logo. For hotels, for instance, such programs monitor compliance with existing legislation, set targets for improvement, and highlight “best practices” which go beyond compliance. They involve an emphasis on adopting environmentally-friendly, usually cost-saving procedures and renovations. Often these mass certification programs are developed and financed by the industry trade associations who are the main stakeholders involved in design and implementation. Some allow certification at a corporate level (a hotel chain or tour operator) or whole destination (Green Globe 21), rather than at each site-specific individual unit. While these programs focus on the physical plant or the business, they also usually say they include both staff training and community outreach sections. In actuality, however, these “social” concerns concentrate on teaching the staff to implement the environmental management system; the community outreach may be little more than donations of surplus items to the community that can be packaged and advertised as “best practices.” Most often this type of certification is used for the mass or conventional tourism industry, particularly large accommodations or hotel chains. Rather than having wide stakeholder involvement, most of these programs are dominated by industry. In fact, many develop as sort of pre-emptive strikes aimed at getting industry off the block before government, NGOs, or local communities can set up an eco-labelling or certification program.

While mass tourism certification programs are, in a sense, the narrowest and least effective of the certification models, they are also typically the best funded, best known, and most-heavily marketed—precisely because they are financed by major players within the tourism industry. In sum, mass tourism certification programs can lead to some “green” innovations, but they are insufficient to generate sustainable tourism.

In contrast, the next two categories of certification programs do contain sufficient criteria to at least hold out the possibility that the businesses they certify are following sound environmental and social practices. As one recent study argues,

“Progress towards sustainable tourism requires certification programmes to embrace more explicitly the concept of sustainable development (especially some of the equity aspects of this term) and promote it to their members.” (Synergy, 2000:16 as quoted in Marth Honey and Abigail Rome, 2002: 37) Further, certification programs may work better in terms of promoting sustainable development if they differentiate between the broader category of sustainable tourism and a more specific category for ecotourism, either through different levels within the same program or through separate programs.

2.5.3.2 Sustainable Tourism Certification

This type of program measures a range of environmental, socio-cultural, and economic equity issues both internally (within the business, service, or product) and externally (on the surrounding community and physical environment). It uses primarily a performance based system, third-party auditors, and a multi-faceted questionnaire drawn up in consultation with a variety of stakeholders. It may also include creating or implementing a management system to help establish better and more efficient environmental procedures within the business. Most often sustainable tourism certification (such as ECOTEL) involves individual or site-specific businesses, such as hotels and lodges.

Sustainable tourism certification programs can also cover distinct geographic areas (such as Costa Rica) or particular sectors of the industry (such as Blue Flag’s program certifying beaches and marinas) and its standards are set to fit these conditions. A number of the programs analyzed in this report, including Costa Rica's Certification for Sustainable Tourism (CST), fit most comfortably into this category.

Sustainable tourism certification appears to offer the best option in terms of developing global standards and a model program. Its criteria are broad enough to encompass various sizes of businesses and types of tourism, including niche markets such as nature, historic, and cultural. At the same time, because it focuses on performance both inside and outside the business, it offers a more holistic approach to sustainability. But even if one sustainable tourism program were adopted as a global model for certification, specific regional and/or climatic differences could be accommodated through two or more sets of criteria, as Blue Flag has for its beaches and marinas.

2.5.3.3 Ecotourism Certification

This covers those businesses that describe themselves (through their brochures, websites, etc.) as involved in ecotourism. These are invariably businesses located in or near natural areas and involved in the protection of pristine and fragile ecosystems. Like sustainable tourism certification, ecotourism certification also focuses on individual or site specific businesses; its standards are tailored to the conditions of a particular country, state, or region; and it is administered locally. This type of program looks beyond the tourism entity itself to assess how it relates to and benefits the local community and the ecosystem in which it operates. The criteria measuring how a business impacts its surroundings is not simply an adjunct; it weighs equally with how the business functions internally in terms of its physical plant and staff and guest relations.

While ecotourism certification demands parity between the internal and external impacts, in some instances, a company's role in the community and in conservation is given even more weight than everyday business functioning. For instance, while the first two types make no distinction between locally-owned and foreign-owned businesses, an ecotourism certification program would likely weight local ownership as important since ecotourism strives to promote sustainable development partly through economic empowerment.

In a country like Costa Rica, whose tourism image is very clearly that of ecotourism, it would seem important to evaluate separately (either within the same program or in parallel programs) those businesses that claim to be involved in ecotourism. Costa Rica's original eco-labelling program, the "Sustainable Tourism Rating" developed for the New Key to Costa Rica guidebook, is among the oldest ecotourism certification programs. Simple "green standards" for the mainstream tourism reduce energy consumption and waste. Ecotourism standards go beyond questions of eco-efficiency (i.e., those that are both cost-saving and environmentally better) and are more responsive to national and local stakeholder concerns. They ask how ecotourism companies contribute to conservation of protected areas and what mechanisms are in place to ensure benefits reach local people. Often launched by governments, academics, and NGOs, they usually lack adequate financing and support from industry. (Epler Wood and Halpenny, 2000:1 as quoted in Martha Honey and Abigail Rome, 2002: 43)

NEAP in Australia is an example of an ecotourism certification program. Two of its three levels distinguish and rate those enterprises involved in ecotourism; the third category rates nature tourism enterprises or those more properly involved in sustainable tourism. NEAP's three-tiered division, which separates ecotourism from sustainable tourism certification, is preferred by The International Ecotourism Society (TIES), Rainforest Alliance, and a number of other ecotourism experts, environmentalists, and community empowerment proponents. They argue that there can be a positive, bottom-up influence among these different types, with ecotourism criteria helping to encourage more rigorous standards throughout the industry.

But separating out ecotourism with distinct criteria and logos is not accepted by others who are involved in certification programs. Among the opponents is Amos Bien, who has been involved in crafting and analyzing certification programs in Central America. Bien, as well as officials of the CST program and the Sri Lanka Ecotourism Society, among others, believe there should be only one certification program, covering the full range from conventional to ecotourism businesses. "Standard tourism and ecotourism must be lumped together," Bien argues, "in 'appropriate' environmental and social classification and certification systems. It is the only way to level the playing field. Otherwise," he writes, "what happens is that businesses that are already doing a decent environmental job (e.g. eco-lodges) will be held to a much higher standard than their neighbours who don't bother". (Bien, 2000 as quoted in Martha Honey and Abigail Rome, 2002: 43)

While it is true that ecotourism certification sets higher standards, there are also difficulties if all three certification categories—mass, sustainable, and ecotourism—are collapsed together as they are in the CST program. In that program, both Bien's rural and rugged eco-lodge Rara Avis and the centre city Marriott Hotel receive a level three rating, and this does not tell the public very much. The rating system does not properly reflect, for instance, Rare Avis' high level of involvement in community and conservation programs.

The CST survey "doesn't work well for small and micro-businesses" because it requires ISO-like management systems for its physical plant and has other design features more suitable to larger hotels. In addition, the CST survey gives only minimal attention to lodges that are involved in responsible protection of the land or are involved

in efforts to prevent logging, mining, poaching, and other environmentally destructive activities.

In evaluating and comparing these three systems of mass, sustainable and eco-tourism markets, it is important to ask what each does to satisfy the needs of the principle stakeholders: industry, consumers, and the host country, and local communities. The responses serve to highlight the differences among these types of certification programs:

- Mass tourism certification programs generally satisfy the needs of business by providing cost-saving changes, technical assistance, and continuous improvement, as well as market-distinction and mass market advertising. But they offer weak and often misleading or incomplete information to consumers, and minimize or ignore the needs of host governments (particularly in relatively underdeveloped countries), local communities, and NGOs for social equity, long term economic equity, and environmental protection beyond the business' immediate footprint.

- Sustainable tourism programs do better in satisfying, although not completely, the needs of business, consumers and host governments and communities. The downsides are that such programs do not adequately distinguish those businesses operating in or near natural areas, may be relatively expensive for small and medium size businesses, may not have adequate funding or sufficient marketing to consumers, and may leave local communities and NGOs sensing they have been marginalized.

- Ecotourism certification programs tend to favor small and medium businesses, to be most respectful of the needs of local communities and conservation, and help the public distinguish businesses, geographical areas, and even whole countries committed to ecotourism. But, typically, these programs suffer from insufficient funding for audits and promotion, thereby not meeting the needs of the businesses they certify, government, or the ecotourism public. (Martha Honey and Abigail Rome, 2002: 33-45)

2.5.4 Common Components of Certification Programs

Despite the above distinctions among certification program—the process vs. performance methodologies and the three tiers—mass tourism, sustainable tourism, and ecotourism—there are at least six components that they all certification programs share in common. These are:

2.5.4.1 Voluntary Enrolment

At present, all certification programs in the travel and tourism industry are strictly voluntary. Unlike EIAs which are usually obligatory, businesses can decide whether to apply for certification, and most often companies pay for the audit and other services. It is likely that, in the future, governments will use more 'carrots' such as marketing and promotion and 'sticks' such as denying contracts, particularly in environmentally sensitive areas, to uncertified companies.

2.5.4.2 Logo

All programs award use of a selective logo, seal, or brand designed to differentiate their product in the marketplace and to be recognizable to consumers. Most permit the logo to be used only after certification is achieved. Green Globe 21, however, allows businesses or destinations that become members to use its logo from the time they officially commit to becoming certified, and before they have implemented any actions and been externally audited. Once certified, a slightly different logo—one with a check in the middle—is issued. A number of experts say such a slight distinction is lost on most consumers.

Many programs give logos for different levels of achievement, one to five suns, globes, or leaves, for instance. ECOTEL, which measures environmental performance in “exclusive” hotels, inns, and resorts, has one of the more complicated systems: it offers a different logo for each of five areas: 1) solid waste management, 2) energy efficiency, 3) water conservation, 4) employee environmental education and community involvement, and 5) environmental commitment. Each logo, in turn, has a three-level scoring system. This allows members to display a combination of logos as they progress to different levels in each of the five areas. The drawback, however, is that it may prove confusing to consumers.

In Costa Rica, the CST program also has a rather unusual scoring process: it ranks those it certifies on a scale of one to five, based on their performance in four areas. As explained earlier, the final ranking, which determines how many leaves are issued as the logo, is the lowest score in any of the four areas. (The scores are not averaged.) For instance, Rara Avis, the first eco-lodge in Costa Rica, scored a five in two thematic areas and a three in the other two; it received an overall rating of three leaves. CST officials say this system is intended to encourage equal improvement in all four areas in order to receive the highest possible score.

All programs state, at least on paper, that logos will be withdrawn if the company fails to comply with the certification system or if the programs themselves adopt more stringent certification criteria. Yet policing has proved difficult. It is estimated that hundreds of companies that originally signed up for Green Globe membership may be using the logo, even though they have not been through and may not qualify for certification under Green Globe 21.

2.5.4.3 Criteria that comply with regulations, or go beyond

All certification programs require, at a minimum, that members comply with local, national, regional, and international regulations and many have criteria that require companies go beyond these baselines. Sustainable tourism and ecotourism programs, which include socio-cultural and conservation criteria, always go beyond regulations. The criteria influence other aspects of the certification program, including the evaluation and monitoring procedures and the type and sophistication of technical assistance needed. In analyzing tourism eco-labels in Europe, one recent study concluded that for national and sub-national programs, the number and the demands of the criteria are higher than for regional and international schemes (Fematour, 2000 as quoted in Martha Honey and Abigail Rome, 2002: 53), an observation that seems applicable to other geographical regions as well.

One of the challenges is that regulations differ substantially from country to country, both in their rigor and in enforcement. In poorer countries in Africa, Asia, and Latin America where tourism is expanding rapidly but government regulations may be weak, certification programs can possibly help to promote and ensure compliance. It is frequently argued that tourism certification programs covering corporations that span a number of countries (a hotel chain or tour operator, for instance) have the potential to raise standards in countries with weaker regulations. Others, however, note that given the differences among countries, it is better to have site-specific certification.

2.5.4.4 Published Commitment to Sustainable Development

All tourism businesses that undertake certification make a broad statement about their commitment to sustainable development, although they can differ widely in what practices they say are necessary for sustainable development. Those involved in tourism certification programs tend to have policy statements that refer only to their internal operations, with a focus on water and air quality, waste and energy use; companies involved in sustainable tourism or ecotourism will have broader statements that also

encompass their impacts on conservation and the host community. The Smart Voyager program in the Galapagos Islands, for example, states, “The Smart Voyager seal of approval gives travellers the assurance that they are supporting operators who care about the environment, wildlife conservation, tourist safety and the well-being of workers and local communities.”

In the Canadian province of Saskatchewan, Horizons, the “Saskatchewan Ecotourism Accreditation System” provides businesses with a certificate and a logo indicating that they fulfil the principles of ecotourism set out by the Ecotourism Society of Saskatchewan (ESS).

2.5.4.5 Assessment and Auditing

All certification programs award logos based on some kind of assessment. Assessment or auditing can be first-, second-, or third-party, that is, it can be done by the business itself, by an industry trade association, or by an independent firm, NGO, or even the government. There are an estimated 200 certifying agencies around the world, most of which are for-profit companies. Some are accredited, that is they are recognized by a national accreditation body; others are not.

The earliest programs were often first-party ones that rated compliance based only on a written questionnaire filled out by the business. Concerns about the weakness and abuses of this self-assessment process have led to many programs moving to on-site audits by independent third-parties. There are a growing number of professional auditors on the staffs of certifiers, but more often they function as independent contractors carrying out such external audits. Some programs still use a written pre-screening application form as a first step in the certification process and then move to on-site, third party audits and/or spot checks, and follow-ups, usually after one or two years. Concerns have been raised as well that there can be a conflict of interest when a certification program handles both the recruiting of applicants and the auditing and awarding of logos. While neither NEAP nor CST have, as yet, established third party auditing, officials argue that in the initial stages it has been useful to have these functions centralized. They say it has helped their staff to perfect the program, iron out wrinkles, and gain invaluable expertise. But officials with both programs also recognize that in the future it is imperative, for a number of reasons, to have outside assessors done the audits. Another issue is that of making the results of audits public so that consumers and others (in the industry, government, NGOs, etc.) can judge the strengths and

weaknesses of a company and make comparisons among companies. While desirable, the CST program is one of the few that posts the results of its audit questionnaire on its website, but even here the site is not very user friendly and, as is standard business practice, information that the company deems to be proprietary is withheld.

2.5.4.6 Membership and Fees

Many certification programs enrol participants as members and charge a fee to those businesses applying for certification. This money is used to run the program and to support advertising and promotion of the logo and of the companies that are certified. The certification programs, and/or auditing bodies, also charge fees for the assessments they provide and for auditing services, usually structured according to the size and income of the company. These fees vary widely and tend to be highest for those using ISO 14001 or other types of environmental management systems. To set up an environmental management system, go through a training program for implementing the EMS, and finally have a third-party audit can add up to many thousands of dollars, making cost the biggest barrier to certification for small and medium-sized companies. Some programs—CST and Blue Flag, for instance—have received government funding, allowing them to do audits either free or at a minimal cost. However, such government funding may not be available in the long term, and the financing of certification program will remain a major issue for further discussion. (Martha Honey and Abigail Rome, 2002: 51-54)

2.6 Guidelines to Develop Certification Systems

There is an establishment Mohonk agreement to support development of certification systems, it was collected information on framework and principles for certification of sustainable and ecotourism.

2.6.1 Mohonk Agreement

This document contains a set of general principles and elements that should be part of any sound ecotourism and sustainable tourism certification programs. This framework was unanimously adopted at the conclusion of an international workshop convened by the Institute for Policy Studies with support from the

Ford Foundation. It was held at Mohonk Mountain House, New Paltz, New York on November 17-19, 2000.

Workshop participants recognized that tourism certification programs need to be tailored to fit particular geographical reasons and sectors of the tourism industry, but agreed that the following are the universal components that must frame any ecotourism and sustainable certification program. (UNEP&CBD, 2001:Annex 33-35)

1. Certification scheme overall framework

Basis of Scheme

The objectives of the scheme should be clearly stated. The development of a certification scheme should be a participatory, multi-stakeholder and multi-sectoral process (including representatives from local communities, tourism businesses, non-governmental organizations, community-based organizations, government, and others).

- The scheme should provide tangible benefits to tourism providers and a means for tourists to choose wisely
- The scheme should provide tangible benefits to local communities and to conservation
- The scheme should set minimum standards while encouraging and rewarding best practice
- There is a process to withdraw certification in the event of non-compliance
- The scheme should establish control of existing/new seals/logos in terms of appropriate use, an expiration date and, in the event of loss of certification, withdrawal
- The scheme should include provisions for technical assistance
- The scheme should be designed such that there is motivation for continual improvement—both of the scheme and of the products/companies to be certified.

Criteria Framework

- Criteria should provide the mechanism(s) to meet the stated objective(s)
- Criteria used should meet and preferably exceed regulatory compliance
- Criteria should embody global best practice environmental, social and economic management
- Criteria should be adapted to recognizing local/regional ecological, social and economic conditions and local sustainable development efforts

- Criteria should be subject to a periodic review
- Criteria should be principally performance-based and include environmental, social and economic management process elements

Scheme Integrity

- The certification program should be transparent and involve an appeals process
- The certification body should be independent of the parties being certified and of technical assistance and assessment bodies (i.e., administrative structures for technical assistance, assessment and auditing should avoid conflicts of interest)
- The scheme should require audits by suitably trained auditors
- The scheme should require mechanisms for consumer and local community feedback

2. Sustainable tourism criteria

Sustainable tourism is tourism that seeks to minimize ecological and socio-cultural impacts while providing economic benefits to local communities and host countries. In any certification scheme, the criteria used to define sustainable tourism should address at least minimum standards in the following aspects (as appropriate):

Overall

- Environmental planning and impact assessment has been undertaken and has considered social, cultural, ecological and economic impacts (including cumulative impacts and mitigation strategies)
- Environmental management commitment by tourism business
- Staff training, education, responsibility, knowledge and awareness in environmental, social and cultural management
- Mechanisms for monitoring and reporting environmental performance
- Accurate, responsible marketing leading to realistic expectations
- Consumer feedback

Social/Cultural

- Impacts upon social structures, culture and economy (on both local and national levels)

- Appropriateness of land acquisition/access processes and land tenure
- Measures to protect the integrity of local community's social structure
- Mechanisms to ensure rights and aspirations of local and/or indigenous people are recognized

Ecological

- Appropriateness of location and sense of place
- Biodiversity conservation and integrity of ecosystem processes
- Site disturbance, landscaping and rehabilitation
- Drainage, soils and storm water management
- Sustainability of energy supply and minimization of use
- Sustainability of water supply and minimization of use
- Sustainability of wastewater treatment and disposal
- Noise and air quality (including greenhouse emissions)
- Waste minimization and sustainability of disposal
- Visual impacts and light
- Sustainability of materials and supplies (recyclable and recycled materials, locally produced, certified timber products, etc.)
- Minimal environmental impacts of activities

Economic

- Requirements for ethical business practice
- Mechanisms to ensure labor arrangements and industrial relations procedures are not exploitative, and conform to local laws and international labor standards (whichever are higher)
 - Mechanisms to ensure negative economic impacts on local communities are minimized and preferably there are substantial economic benefits to local communities
 - Requirements to ensure contributions to the development/maintenance of local community infrastructure

3. Ecotourism criteria

Ecotourism is sustainable tourism with a natural area focus, which benefits the environment and communities visited, and fosters environmental and cultural understanding, appreciation, and awareness. In any ecotourism certification scheme, the

criteria should address standards (preferably mostly best practice) for sustainable tourism (as per above) and at least minimum standards for:

- Focus on personal experiences of nature to lead to greater understanding and appreciation
 - Interpretation and environmental awareness of nature, local society, and culture
 - Positive and active contributions to conservation of natural areas or biodiversity
 - Economic, social, and cultural benefits for local communities
 - Fostering of community involvement, where appropriate
 - Locally appropriate scale and design for lodging, tours and attractions
 - Minimal impact on and presentation of local (indigenous) culture

2.6.2 Development of the certification system by the World Tourism Organization

Certification systems for sustainable tourism need to be developed and operated to fit geographical, political, socio-economic and sectoral characteristics of each country. For this reason, the following recommendations serve as general orientation and they need to be adapted to the economic, institutional, social and environmental conditions prevailing in each country.

WTO brought the means of Mohonk agreement to conduct guidelines to develop certification system to comply with these implementation needs. (WTO, 2003: 1)

A. Certification system

Governments can play a key role in the initiation and development of certification systems for sustainable tourism by creating the supportive legal and institutional structures. The following general recommendations can be made: (WTO, 2003: 3-11)

1. Consider a national certification system as an integral part of sustainable tourism development policies, strategies and objectives, and an effective tool to implement them.
2. Identify key stakeholders and potential target groups relevant to and interested in certification programme.

3. Develop the certification system through multi-stakeholder consultation processes, involving all relevant interest groups, such as different government authorities (tourism, environment, transportation, finance, education, etc); tourism trade associations and other private groups; academic, education and research institutions; NGOs; consumer associations; etc. The development and the operation of a successful certification program in many cases lays in the multi-stakeholder representation of the team awarding certificates and supporting the program.

4. Coordinate an in-depth research on the conditions and feasibility of a certification system, including aspects such as:

- Existing legal and voluntary instruments affecting the tourism sector (e.g. laws, regulations, taxes, subsidies, local certification systems, codes of conduct, environmental awards, etc.);
- Experience of certification systems applied in other sectors in the country, like agriculture, forestry, and draw lessons from them for the tourism sector
- Certification criteria;
- Operational mechanisms: application, verification, awarding, revision and inspection procedures; consulting and technical assistance for participants, marketing and communication; funding.

5. Provide finance and/or seek partners for co-financing and providing technical contributions for the research, development and operational costs of certification programme (e.g. different government departments, NGOs, academic institutions, international finance and development agencies, private foundations, etc.).

6. Ensure transparency throughout all the stages of the development and operation of the certification system and establish an appeals process.

7. Make clear to the private sector the benefits, costs and other implications of certification systems.

8. Develop incentives to motivate and encourage tourism companies to become certified, e.g. marketing incentives by giving priority in trade shows and nationally sponsored publicity, or ensuring access to environmental technologies, etc.

9. Consider issues affecting the sustainability of destinations as a whole, involving all tourism product and service providers.

10. Pay special attention to equitable access to certification, especially by small and medium size firms, as they can have more difficulties in meeting the costs and technical requirements than bigger companies.

11. Conduct pilot projects for testing and demonstration of the certification system.

12. Prepare the market for certification, in order to reach a good demand level from tourism companies and a critical mass at the initial phase to get the system running.

B. Certification criteria

Developing certification criteria is a critical part of the certification system development process. The following general recommendations need to be considered:

1. Base criteria on existing legal standards and instruments and set them well above legal compliance.

2. Include the precondition of compliance by the applicant with these legislations.

3. Address the three dimensions of sustainability: environmental, socio-cultural and economic issues.

4. Define core criteria and supplementary criteria specific for different tourism product and service groups (e.g. hotels and other accommodations, transportation services, restaurants, tour operators and travel agents, attractions, etc.). By this way consider the implications to destinations as a whole, and not just certain tourism product and service groups.

5. In bigger countries, criteria can be adjusted to specific regional and local environmental and socio-economic conditions.

6. For each criterion, define indicators that are measurable and easy to understand by the different type of stakeholders involved in the certification process.

7. Base criteria and indicators on scientific research that evaluates the key environmental and socio-economic impacts of the sector.

8. Criteria should refer to attainable and realistic goals for private sector participants.

9. Criteria can be set in different levels of requirements: from more easily achievable to very demanding criteria. Thus, the certification system sets a framework for continuous improvement whereby applicants can achieve higher performance levels step by step.

10. Compliance with criteria can be measured through process and performance based assessments. Indicators are essential tools for measuring environmental, social and economic impacts of tourism operations:

Environmental indicators can relate to the following factors, among others:

- Environmental impact assessment conducted for setting up the operation or construction of establishments;
- Environmental management practices, company policies and technical measures (e.g. energy, water saving and waste treatment devices, environmental friendly transportation, etc.) in place;
- Land use and property issues in destinations;
- Health and safety;
- Use of natural resources:
 - Energy (consumption, reduction, efficiency)
 - Water (consumption, reduction, quality)
 - Solid and liquid waste (reduction, reuse, recycling, treatment, disposal)
 - Appropriate building materials
 - Hazardous substances (reduction, handling, use of nature friendly cleaning products)
 - Noise (reduction)
 - Air quality (quality, improvement)
 - Habitat/eco-system/wildlife maintenance and Enhancement;
- Environmental information/interpretation/education for customers;
- Transportation services (public transport, environmental friendly alternatives;
- Indicators and standards on the impacts at specific tourist use areas (e.g. beaches) and on the impacts caused by specific tourism activities and facilities (e.g. diving, golf, marinas etc.);
- Visual impacts of establishments and infrastructure; etc.

Social indicators can relate to the following factors, among others:

- Social impact assessment conducted for setting up the operation and the establishments;
- Staff policies and management (information, education, training, incentives, health, safety, etc.);
- Relationships with local communities (local employees, outreach and education programme);
- Emphasis on, and conservation of local/regional culture, heritage and authenticity;

- Maintaining aesthetics of physical development/architecture;
- Community feedback systems, satisfaction of local population;
- Contribution to community development purposes (infrastructure improvement; social services, etc.);
- Information provided to guests on sustainability aspects;
- Guest feedback systems in place, customer satisfaction, etc.

Economic indicators can relate to the following factors, among others:

- Creation of local employment (number of employees from local communities and their level of skills);
- Supply chain management through green and sustainable purchasing policies;
- Creation of networks of environmentally friendly businesses within a given destination;
- Responsible marketing;
- Use of locally sourced and produced materials and food, etc.

In addition, certification criteria for ecotourism should specifically address the elements below, besides the general sustainability criteria:

- Financial and in-kind contributions to conservation of ecotourism sites by companies;
- Level of involvement of local communities and benefits accruing to them;
- Use of specialized guides and other interpretation techniques, information provided to tourists through ecotourism operations;
- Environmental education activities provided for tourists and local populations;
- Locally appropriate scale and design for lodging, infrastructure and tours;
- Minimal impact on and the appropriate presentation of local and indigenous culture.

11. Indicators to measure the success of certification systems can address:

- The number of applications and certified companies (i.e. increase over time of the number of companies registered in a certain certification system);
- The percentage of certified companies in the different tourism product and service groups;

- Improvement in environmental and social performance in certified companies (e.g. changes in water and energy consumption, resource savings, etc.);

- Environmental and social performance of certified companies as compared to non-certified ones (e.g. a current estimate is that environmental performance per certified accommodation enterprises can be taken as about 20 % better than the average performance at accommodation facilities in Europe).

12. Consider the whole product life cycle when setting product environmental criteria (from the manufacturing, transporting, through purchasing, consumption, to recycling, disposal, etc.).

13. Undertake periodic revision and update of criteria (e.g. every 2-3 years).

C. Operation of certification systems

The procedure is normally composed of the application, verification and certification processes. The funding mechanism for the above services and procedures is a crucial and critical element for the success of certification systems. Normally there is a funding, verification and certification body interacting in these processes. In many cases the funding and certification bodies coincide. Fundamental components of any certification system are the facilitation of consulting, advisory and technical assistance and marketing services. The following general recommendations can be made in relation to the operational processes:

Application

1. The system should be open to all potential applicants.
2. Provide clear and easily accessible information on the criteria, costs and benefits and other conditions of certification (e.g. through Internet, email, telephone, information kit).
3. Offer immediate sources for consultation services.
4. Show tangible benefits for applicants (e.g. costs savings, marketing advantage, access to technical assistance and modern technology and financial possibilities, etc.) and explain clearly the commitments and costs.
5. Application documents should be clear, easy to understand and fill in.

6. Conduct a pre-evaluation/assessment of the applicant in order to identify technical and technological aspects that need to be improved to meet the criteria. Provide assistance and financial incentives for these improvements.

Verification

7. Verification of compliance with criteria should be done by an independent or third-party organization. In other words by a body which is independent from the parties being certified and of technical assessment or funding.

8. Verification is normally done through a combination of different activities: review of application documents and references, self-assessment by the operation through questionnaire, on-site visit, and fees to be paid by the applicant.

9. Verification audits should be conducted by suitably trained auditors.

10. The verification process can be also used to give recommendations to the applicants on how to improve their performance and achieve further progress.

Certification (awarding of certification)

The certification is basically the awarding of the certification to the applicant, granting a permit for using the logo, marketing and other services of the system.

11. Certification bodies can be composed of representatives of the mayor stakeholder groups participating in the development and operation of the system. Governments have a key role in certification bodies, by giving credibility and recognition of the system.

12. As it was also mentioned among the recommendations for criteria development, awarding of certification can be done at single-level or at multi-level. The latter one occurs if criteria are set on different scales with a view to ensure a framework of continuous improvement.

13. The certification, the use of a logo and related benefits should be granted for a predetermined period, after which re-assessment and verification should be conducted to ensure continuous compliance with the same or higher criteria.

14. Follow up control can be conducted after certification. For example, the WTO study on voluntary initiatives demonstrated that more than 50% of the certification systems currently operating undertake some control visits after certification: 38% are announced, and 17% are surprise visits. Some eco-labels either do

phone checks, stimulating guests' feedback or sending "mystery guests" to the certified tourism service.

15. Procedures have to be in place for the cancellation and withdrawal of certification and the use of the corresponding logo in case of non-compliance.

16. The certification system can also include consumer and local community feedback mechanisms.

Consulting, advisory and technical assistance services

The facilitation of the following services represents important added value for tourism companies and can be decisive factors for joining the certification system.

17. Provide technical consultancy options from the initial expression of interest and through the application phases onward, and give guidance to the applicant at every stage of the process.

18. Facilitate technical assistance for applicants so that they can introduce advanced management techniques and technology to meet the certification criteria. Provide access to environmental technologies, equipments and techniques by creating alliances with other organizations that can provide assistance for this purpose.

19. Develop training and capacity building programme in form of courses, workshops, distance learning, etc.

20. Organize regular meetings for certified companies to promote the exchange of experiences and the sense of group.

21. Constant assistance and advisory is especially important in certification systems where the criteria and awarding are set on different scales.

Marketing and communication

Marketing is another fundamental element of certification programme, representing perhaps the biggest attraction and the most tangible benefits for private companies. The following general recommendations can be made:

22. Develop a precise marketing strategy for the certification system targeting three groups in principle:

22.1 Potential candidates: aiming at attracting companies to join the programme

22.2 Applicants and certified companies: providing marketing and promotional support and market advantages for them

22.3 Consumers: reaching recognition of the certification programme, fostering responsible travel choices, and make effective the marketing advantage for certified companies.

23. Develop a well-distinguished and unequivocal logo design for the system. The logo can be accompanied by a motto, or slogan. Ensure legal protection of the logo.

24. The presentation of the system in media and communication should reflect a well recognized corporate image in the market for businesses and consumers as well.

The system can represent a sort of brand.

25. Use all available forms and channels to publicize and provide information on the certification programme for companies and consumers (e.g. brochures, flyers, guide books, printed and electronic media, Internet, conferences, seminars, tourism and trade fairs, etc.)

26. Give good media coverage to the awarding ceremonies.

27. Provide marketing support and promotion for certified companies through national tourist boards or national tourism marketing organizations, e.g. presentation of these companies in national brochures, catalogues, listings, websites, support for presence at national stands at tourism fairs and exhibition, etc.

28. Give recommendations and examples to applicants and certified companies on how to include the certificate in their own marketing activities.

29. Demonstrate the distinction on environmental performance, economic and socio-cultural effects between certified and non-certified products/companies.

30. Communicate on a regular basis with certified members (e.g. through periodic meetings and events, newsletters, emails, exclusive access to information on Internet, etc.)

31. Provide clear and easily understandable information to consumers on the characteristics and added value that certification represents.

32. Develop consumer awareness raising and education campaigns on the certification system and certified products.

33. Involve consumer associations in these efforts

Fees and funding

Governments have a key role in providing funding themselves, and/or in conceiving and developing alternative funding mechanisms with other partners for the operation of the certification system.

34. Establish the right balance between financial contributions of the public and private sectors.

35. Ensure that the sources of funding do not create a conflict of interest, since undue influence by funding organizations should be avoided in the certification procedure.

36. Establish fees for participants to cover (at least part of) application and verification costs. Fees should be kept as low as possible in order to encourage participation.

37. Fees should be calculated proportionally to size of businesses (e.g. by number of beds or visitors, turnover, etc.).

38. Provide incentive measures and support the application of companies, especially of small and medium size enterprises that would otherwise be left out (e.g. by soft loans and subsidies to make the necessary improvements to meet the criteria).

39. Consider in-kind contributions by governments for the operation, e.g. providing facilities, office space and equipment.

2.7 Blue Flag

The Blue Flag is an exclusive eco-label awarded to more than 3000 beaches and marinas in 33 countries across Europe, South Africa, Canada and the Caribbean in 2005. (www.blueflag.org)

The Blue Flag Campaign is owned and run by the independent non-profit organisation Foundation for Environmental Education (FEE). The Blue Flag works towards sustainable development at beaches/marinas through strict criteria dealing with water quality, environmental education and information, environmental management, and safety and other services. The Blue Flag Campaign includes environmental education and information for the public, decision makers and tourism operators.

Background

The Blue Flag was born in France in 1985 where the first French coastal municipalities were awarded the Blue Flag on the basis of criteria covering sewage treatment and bathing water quality.

Blue Flag on European level in 1987

1987 was the "European Year of the Environment" and the European Commission was responsible for developing the European Community activities of that year. The Foundation for Environmental Education in Europe (FEEE) presented the concept of the Blue Flag to the Commission, and it was agreed to launch the Blue Flag Campaign as one of several "European Year of the Environment" activities in the Community.

The French concept of the Blue Flag was developed on European level to include other areas of environmental management, such as waste management and coastal planning and protection. Besides beaches marinas also became eligible for the Blue Flag. In 1987, 244 beaches and 208 marinas from 10 countries were awarded the Blue Flag.

The Blue Flag success

Since 1987 the Campaign has year after year increased in numbers of Blue Flags. The criteria have during these years been changed to more strict criteria. As an example, in 1992 the Campaign started using the restrictive guideline values in the EEC Bathing Water Directive as imperative criteria, and this was also the year where all Blue Flag criteria became the same in all participating countries

The Blue Flag Campaign outside Europe

In 2001 FEE decided to become a global organisation by changing the name from FEEE to FEE (Foundation for Environmental Education). Several organisations and authorities outside Europe have made applications to FEE, wishing for co-operation

on spreading the Blue Flag Campaign to non-European countries. FEE has been co-operating with UNEP and WTO on extending the Campaign to areas outside Europe.

The Blue Flag Campaign has already been implemented in the Republic of South Africa, Canada, Morocco, New Zealand and in four countries in the Caribbean region. Chile is currently in the pilot phase of the campaign and interest has also been expressed by the USA, Argentina, Brazil, Ecuador, the United Arab Emirates and countries in South East Africa.

FEE has made the overall decision that the beach criteria within a region should be similar. The beach criteria has however varied from region to region reflecting the specific environmental conditions of the region. As of 2006 an international set of criteria will be used with some variation within.

The Campaign today

In 2005, 2472 beaches and 635 marinas were awarded the Blue Flag. 35 countries are currently participating in the Blue Flag Campaign: Bahamas, Belgium, Bulgaria, Canada, Croatia, Cyprus, Denmark, Dominican Republic, England, Wales and Northern Ireland, Estonia, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Jamaica, Latvia, Lithuania, Montenegro, Morocco, the Netherlands, New Zealand, Norway, Poland, Portugal, Puerto Rico, Scotland, Slovenia, South Africa, Spain, Sweden and Turkey. Chile, Romania and Russia are currently running the campaign in the pilot phase.

Blue Flag in a new country

The Foundation for Environmental Education (FEE) and the Blue Flag Co-ordination often receive requests about how to implement the Blue Flag Campaign in a new country. First of all, FEE and the Blue Flag Co-ordination should be contacted in case of interest for starting up the Blue Flag Campaign in a new country/region.

Membership of fee

In order for a new country to start up the Blue Flag Campaign, a suitable organisation must be identified to carry out the task as national Blue Flag operator. In order to be suitable, the organisation must be a non-profit, non-governmental, independent organisation and it must have environmental education and protection as important objectives. It is an obvious advantage if the organisation has a history of environmental work related to local authorities and also experiences with national initiatives. If there is no suitable organisation, a new national organisation can be founded.

Once such an organisation is found or founded, it must become a member of the Foundation for Environmental Education (FEE). This in turn means that the organisation must be in accordance with the statutes of FEE, be able to raise the necessary funds to pay the subscription fee, be able to run the Blue Flag Campaign and lastly be ready and willing to participate in the other activities of FEE as well. It is the FEE General Assembly that considers and approves applications for membership and it puts a great deal of emphasis on whether the organisation is generally sharing the objectives of FEE.

Implementation of the Blue Flag Campaign in a New European Country

FEE and the Blue Flag Co-ordination have good experiences in implementing the Blue Flag Campaign in a new European country. The Campaign started with 10 participating countries in 1987 and today has the Blue Flag Campaign implemented in 29 European countries. Furthermore, work is taking place on implementing the Blue Flag in other European countries.

In order to implement the Blue Flag Campaign in a new European country, the FEE member organisation must go through the following four steps in the implementation process:

- 1) Organising a Blue Flag workshop/meeting
- 2) Establishment of a Blue Flag national committee

3) Carrying out the Blue Flag feasibility phase (production of national and local feasibility report)

4) Running the Blue Flag pilot phase (testing the compliance at pilot sites, filling out the gaps)

Implementation of the Blue Flag Campaign in a New Country Outside Europe

FEE and the Blue Flag Co-ordination have in the recent years begun the implementation of the Blue Flag Campaign in countries and regions outside Europe. South Africa, Morocco, Canada, New Zealand and four countries in the Caribbean have already implemented the Campaign, Chile currently has a beach in the pilot phase, and work with the implementation of Blue Flag is taking place in Brazil, Barbados and Turks & Caicos Islands.

The four steps in the implementation described above are also applicable for countries outside Europe. It is a good idea to consider how the Blue Flag implementation process can be started in several countries in a non-European region at the same time as this would strengthen the implementation work.

Beach Criteria

The award of a Blue Flag beach is based on compliance with 29 criteria covering the aspects of:

- 1) Water Quality
- 2) Environmental Management
- 3) Safety and Services
- 4) Environmental Education and Information

Some criteria are imperative (I), some are guideline (G) and some are non-applicable (NA) for certain regions. All imperative requirements have to be fulfilled, and in addition a maximum number of guideline criteria. All Blue Flags are only awarded for one season at a time. If some of the imperative criteria

are not fulfilled during the season or the conditions change, the Blue Flag will be withdrawn.

Water Quality

- Compliance with the requirements and standards for excellent bathing water quality (I)
- No industrial or sewage related discharges may affect the beach area (I)
- Monitoring on the health of coral reefs located in the vicinity of the beach (I - Caribbean, south and East Africa; NA - Europe, Morocco, Canada)
- Compliance of the community with requirements for sewage treatment and effluent quality (G)
- Algae or other vegetation should be left to decay on the beach unless it constitutes a nuisance (I)

Environmental Management

- A beach management committee must be established to be in charge of instituting environmental management systems and conduct regular environmental audits of the beach facility (I - Caribbean, Morocco, South & East Africa, South Pacific; G - Europe and Canada)
 - The beach must comply with all regulations affecting the location and operation of the beach (coastal zone planning and environmental legislation) (I)
 - The beach must be clean (I)
 - Waste disposal bins/receptacles must be available on/by the beach in adequate numbers, regularly maintained and emptied (I)
 - Facilities for receiving recyclable waste materials must be available on/by the beach (I - Europe, South & East Africa, Canada, South Pacific; G - Morocco and Caribbean)
 - Adequate and clean sanitary facilities with controlled sewage disposal (I)

- On the beach there will be no unauthorised camping or driving and no dumping (I)
- Regulation concerning dogs and other domestic animals on the beach must be strictly enforced (I)
- All buildings and equipment of the beach must be properly maintained (I)
- Sustainable means of transportation must be promoted in the beach area (G)

Safety and Services

- An adequate number of lifeguards and/or lifesaving equipment must be available at the beach (I)
- First aid equipment must be available on the beach (I)
- There must be management of different users and uses of the beach so as to prevent conflicts and accidents (I)
- An emergency plans to cope with pollution safety risks must be in place (I)
- There must be safe access to the beach (I)
- The beach area must be patrolled (G - South & East Africa, South Pacific, Morocco; NA - Europe and Canada)
- A supply of potable drinking water must be available on the beach (G)
- A minimum of one Blue Flag beach in each municipality must have access and toilet facilities provided for disabled persons (I)
- Map of the beach indicating different facilities must be displayed (I)

Environmental Education and Information

- Information relating to coastal zone ecosystems and natural, sensitive areas in the coastal zone must be displayed (I)
- Information about bathing water quality must be displayed (I)
- Information about the Blue Flag Campaign must be displayed (I)
- Code of conduct for the beach area must be displayed and the laws governing beach use must be easily available to the public upon request (I)

- A minimum of 5 environmental education activities must be offered (I)

Application procedure

- For a beach, the municipality can apply for the Blue Flag. For a marina, the marina owner applies for the Blue Flag. The responsible local authority files the application form (with enclosed documentation) and sends it to the National Jury. For beaches approved bathing water data from the previous year has to be submitted as documentation together with the application as well.

- To be eligible for the Blue Flag a beach/marina has to fulfill all imperative requirements, and in addition, the fulfillment of a maximum number of guideline criteria is taken into account.

The National Jury

- The National Jury is composed of all major relevant stakeholders on the national level.
- The National Jury evaluates the applications for compliance with the Blue Flag criteria and gives an approval or rejection on the national level. In special cases the National Jury can recommend a dispensation.

The International Jury

- The approved applications and the dispensation cases are forwarded from the National Jury to the International Jury.
- The International Jury is composed of the major relevant stakeholders on the international level.
- The International Jury carries out an evaluation before it finally decides which beaches and marinas to be awarded the Blue Flag for the season.

The International Jury

Composition:

- UNEP (United Nations Environment Programme)
- WTO (World Tourism Organization)
- ILS (International Lifesaving Federation)

- ICOMIA (International Council of Marine Industry Association)
- IUCN (The World Conservation Union)
- EUCC (European Union for Coastal Conservation)
- EU (European Union - European Parliament - Environmental Committee)
- FEE (Foundation for Environmental Education)

The National Jury

Composition :

- Ministry of Environment
- Ministry of Tourism
- Environmental organisations
- Association of local authorities
- National lifesaving federation
- Education experts
- Marina experts

Award for one season

- A Blue Flag awarded beach/marina is only awarded for one season. By renewing the award each season the Campaign ensures that the beach/marina is constantly living up to the criteria.

Compliance with the criterial during the season

- The local authority is obliged to ensure compliance with the criteria whenever flying with the Blue Flag.
- Visitor and guests at Blue Flag beaches/marinas are good observers of compliance with the Blue Flag criteria at the sites.
- During the season, the national environmental protection agency is controlling the bathing water quality data.
- The national organisation and the International Blue Flag Co-ordination are furthermore performing control visits to the Blue Flag sites by.
- In all cases of non-compliance with imperative criteria, the Blue Flag will be withdrawn.

CHAPTER III

METHODOLOGY

The study on development of environmental management system guidelines for sustainable tourist attractions: a case study of Bang Saen beach, Chonburi province is an exploratory research that has studied on the current environmental management system and tourism certification for the beach being a guide for conducting the environmental management system requirements for tourist attractions (Bang Saen beach). The researcher used check list to evaluate the compliance with environmental management system in Bang Saen beach under the Municipality of Muang Saen Suk, brought the results to conduct a draft of environmental management system requirements and submitted questionnaire to 38 experts for recommendations. The comments of experts from Delphi technique were improved before experiment in Bang Saen beach. After that, the researcher concluded the development mean of environmental management system requirements for sustainable tourist attractions.

3.1 Data Collection

The study on development of environmental management system guidelines for sustainable tourist attractions: a case study of Bang Saen beach, Chonburi province, the researcher determined 3 procedures as follows:

3.1.1 Conducting step of the draft requirements

- 1) Study on environmental management system ISO14001
- 2) Study on related tourism standards for the beach
- 3) Draft requirements

3.1.2 Delphi technique

Expert Selection to implement the Delphi technique

The researcher selected the experts who have experiences in tourism and standard and their offices in Bangkok, the qualifications are the following:

1) Expert in tourism

- Experience in tourism planning, developing not less than 5 years

- Education level not less than Bachelor's degree

2) Expert in standard

- Experience in standard not less than 5 years

- Having researches on standard system

- Education level not less than Bachelor's degree

Thomas T. Macmillan (as quoted in Kasem Boonoon, 2522: 28) studied and submitted the research on appropriate number of experts for delphi technique. It was found that the appropriate number of experts is 17 persons up, thus an incorrection of results will decreased. Therefore the researcher used the results of his research for reference and determined the sample of 38 experts for this research.

3.1.3 Research instruments and data collecting

The research instrument is questionnaire based on Delphi technique as follows:

1) the first questionnaire is divided into 2 parts:

Part 1. Question related to the requirements

- Properness in technique and method
- Properness in content and scope
- Properness in tourism market and demand

Part 2. Question consists of:

- Properness in role and duty of local administrative organizations
- Properness in management structure of local administrative organizations
- Properness of organizations model in administrating the system
- Properness in key agency in implementing
- Properness in setting administrative organizations
- Properness of organizations in evaluation and certification

- Properness of the committee at provincial level
- Properness of the committee at national level
- Properness in function of the committee at national level
- Properness in function of the committee at provincial

level

2) the second questionnaire

The researcher brought the answer to improve the requirements and established the new questionnaire which still used the same content but added the information on comment of experts in order to confirm their answers.

The answer from second questionnaire, each expert was informed how his comment was different from others, then he reviewed the compliance between his comment and other comments, and gave the reasons to confirm his different comment.

The researcher criticized all answers and concluded their comments both compliant and different, and stopped the data collecting to process the next step.

3.1.4 Experiment in study area

1) Check List was conducted for the compliance with environmental management system requirements and the administration of the present Municipality of Muang Saen Suk.

2) Results conclusion

3.2 Data Analysis

The researcher collected data by interviewing experts via questionnaire, and analysed the frequency, percentage interpretation. Thus the experts have the compliant comments of 90% up, it assumed that the experts group agreed with these comments.

CHAPTER IV

RESULTS

The research on development of environmental management system guidelines for sustainable tourist attractions: a case study of Bang Saen beach, in Chonburi province is based on the environment management system requirements. The results of the study are indicated as the following aspects:

- 4.1 Study on ISO 14001 and Blue Flag to develop environmental management system requirements for the beach
- 4.2 Draft of environmental management system requirements for sustainable tourist attractions (Bang Saen beach)
- 4.3 Draft of administrative organizations model for environmental management system for the beach
- 4.4 Results of Delphi Technique
 - 4.4.1 General information of experts
 - 4.4.2 The first comment of experts
 - 4.4.3 The second comment of experts
- 4.5 Environmental management system requirements for sustainable tourist attractions (Bang Saen beach)
- 4.6 Administrative organizations model for environmental management system for the beach
- 4.7 Study on the compliance between the Municipality of Muang Saen Suk's administration for Bang Saen beach and environmental management system requirements to sustainable development

4.1 Study on ISO 14001 and Blue Flag to develop the environment management system requirements for the beach

To establish the draft of environmental management system requirement for developing tourist attractions being appropriate, the researcher has determined development means for conducting the draft by using environmental management system and tourism standard which have the compliance with the study objectives.

In this connection, the researcher brought an international standard ISO 14001 for environmental management and Blue Flag standard for beach to study and document for developing the environmental management system requirements for sustainable tourist attractions. The study result of ISO 14001 and Blue Flag is indicated in Table 4.1


Table 4.1 Comparison of ISO 14001 and Blue Flag

ISO 14001	Blue Flag
Environmental management system requirements	
<p>1. General requirements The organization shall establish, document, implement, maintain and continually improve an environmental management system in accordance with the requirements of this International Standard and determine how it will fulfil these requirements. The organization shall define and document the scope of its environmental management system.</p>	<p>1. Unidentified in the requirements</p>
<p>2. Environmental policy Top management shall define the organization's environmental policy and ensure that, within the defined scope of its environmental management system, it a) is appropriate to the nature, scale and environmental impacts of its activities, products and services, b) includes a commitment to continual improvement and prevention of pollution,</p>	<p>2. Environmental policy is not identified in the requirements, but the department requesting the Blue Flag certification shall have an objective to prevent environment.</p>

ISO 14001	Blue Flag
<p>c) includes a commitment to comply with applicable legal requirements and with other requirements to which the organization subscribes which relate to its environmental aspects,</p> <p>d) provides the framework for setting and reviewing environmental objectives and targets,</p> <p>e) is documented, implemented and maintained,</p> <p>f) is communicated to all persons working for or on behalf of the organization, and</p> <p>g) is available to the public.</p>	
<p>3. Planning</p>	
<p>3.1 Environmental aspects The organization shall establish, implement and maintain a procedure(s)</p> <p>a) to identify the environmental aspects of its activities, products and services within the defined scope of the environmental management system that it can control and those that it can influence taking into account planned or new developments, or new or modified activities, products and services, and</p> <p>b) to determine those aspects those have or can have significant impact(s) on the environment (i.e. significant environmental aspects).</p> <p>The organization shall document this information and keep it up to date.</p> <p>The organization shall ensure that the significant environmental aspects are taken into account in establishing, implementing and maintaining its environmental management system.</p>	<p>3.1 There isn't any requirements on environmental aspects, but it is focused on management of seawater quality and litter by specified in the requirements on water quality.</p>
<p>3.2 Legal and other requirements The organization shall establish, implement and maintain a procedure(s)</p> <p>a) to identify and have access to the applicable legal requirements and other requirements to which the organization</p>	<p>3.2 Water quality shall be compliant with the following requirements and standards:</p> <ol style="list-style-type: none"> 1. EU Bathing Water Directive 2. EU Urban Wastewater Directive

ISO 14001	Blue Flag
<p>subscribes related to its environmental aspects, and</p> <p>b) to determine how these requirements apply to its environmental aspects.</p> <p>The organization shall ensure that these applicable legal requirements and other requirements to which the organization subscribes are taken into account in establishing, implementing and maintaining its environmental management system.</p>	
<p>3.3 Objectives, targets and programme(s)</p> <p>The organization shall establish, implement and maintain documented environmental objectives and targets, at relevant functions and levels within the organization.</p> <p>The objectives and targets shall be measurable, where practicable, and consistent with the environmental policy, including the commitments to prevention of pollution, to compliance with applicable legal requirements and with other requirements to which the organization subscribes, and to continual improvement.</p> <p>When establishing and reviewing its objectives and targets, an organization shall take into account the legal requirements and other requirements to which the organization subscribes, and its significant environmental aspects. It shall also consider its technological options, its financial, operational and business requirements, and the views of interested parties.</p> <p>The organization shall establish, implement and maintain a programme(s) for achieving its objectives and targets. Programme(s) shall include</p>	<p>3.3 Activities on environment and education shall be demonstrated together with local community at least 5 times</p> <p>Land-use and development plan for its coastal zone shall be conducted.</p>

ISO 14001	Blue Flag
<p>a) designation of responsibility for achieving objectives and targets at relevant functions and levels of the organization, and</p> <p>b) the means and time-frame by which they are to be achieved.</p>	
<p>4 Implementation and operation</p>	
<p>4.1 Resources, roles, responsibility and authority</p> <p>Management shall ensure the availability of resources essential to establish, implement, maintain and improve the environmental management system. Resources include human resources and specialized skills, organizational infrastructure, technology and financial resources.</p> <p>Roles, responsibilities and authorities shall be defined, documented and communicated in order to facilitate effective environmental management.</p> <p>The organization's top management shall appoint a specific management representative(s) who, irrespective of other responsibilities, shall have defined roles, responsibilities and authority for</p> <p>a) ensuring that an environmental management system is established, implemented and maintained in accordance with the requirements of this International Standard,</p> <p>b) reporting to top management on the performance of the environmental management system for review, including recommendations for improvement.</p>	<p>4.1 There are standard and requirements of local administration organizations for implementation and operation.</p>
<p>4.2 Competence, training and awareness</p> <p>The organization shall ensure that any person(s) performing tasks for it or on its behalf that have the potential to cause a significant environmental impact(s) identified by the organization is (are)</p>	<p>4.2 There are standard and requirements of local administration organizations for implementation and operation.</p> <p>Beach guards must be trained and accredited according to national requirements established by authorities or professional associations.</p>

ISO 14001	Blue Flag
<p>competent on the basis of appropriate education, training or experience, and shall retain associated records.</p> <p>The organization shall identify training needs associated with its environmental aspects and its environmental management system. It shall provide training or take other action to meet these needs, and shall retain associated records.</p> <p>The organization shall establish, implement and maintain a procedure(s) to make persons working for it or on its behalf aware of</p> <ul style="list-style-type: none"> a) the importance of conformity with the environmental policy and procedures and with the requirements of the environmental management system, b) the significant environmental aspects and related actual or potential impacts associated with their work, and the environmental benefits of improved personal performance, c) their roles and responsibilities in achieving conformity with the requirements of the environmental management system, and d) the potential consequences of departure from specified procedures. 	
<p>4.3 Communication</p> <p>With regard to its environmental aspects and environmental management system, the organization shall establish, implement and maintain a procedure(s) for</p> <ul style="list-style-type: none"> a) internal communication among the various levels and functions of the organization, b) receiving, documenting and responding to relevant communication from external interested parties. <p>The organization shall decide whether to communicate externally about its significant environmental aspects, and</p>	<p>4.3 To identify the communication as follows:</p> <ul style="list-style-type: none"> 1. Prompt public warning if the beach or part thereof is expected to or has become grossly polluted or otherwise unsafe, 2. Publicly display on water quality in the form of a table or figure that can be easily understood, 3. Display as close to the Blue Flag as possible information about Blue Flag, 4. Information must include advice on how to behave in such areas.

ISO 14001	Blue Flag
<p>shall document its decision. If the decision is to communicate, the organization shall establish and implement a method(s) for this external communication.</p>	
<p>4.4 Documentation The environmental management system documentation shall include a) the environmental policy, objectives and targets, b) description of the scope of the environmental management system, c) description of the main elements of the environmental management system and their interaction, and reference to related documents, d) documents, including records, required by this International Standard, and e) documents, including records, determined by the organization to be necessary to ensure the effective planning, operation and control of processes that relate to its significant environmental aspects.</p>	<p>4.4 The documentation are conducted : 1. Emergency plan 2. Information on natural sensitive areas in coastal zone, including its flora and fauna must be publicly displayed and included in tourist information.</p>
<p>4.5 Control of documents Documents required by the environmental management system and by this International Standard shall be controlled. Records are a special type of document and shall be controlled in accordance with the requirements. The organization shall establish, implement and maintain a procedure(s) to a) approve documents for adequacy prior to issue, b) review and update as necessary and re-approve documents, c) ensure that changes and the current revision status of documents are identified, d) ensure that relevant versions of applicable documents are available at points of use, e) ensure that documents remain</p>	<p>4.5 Unidentified in the requirements</p>

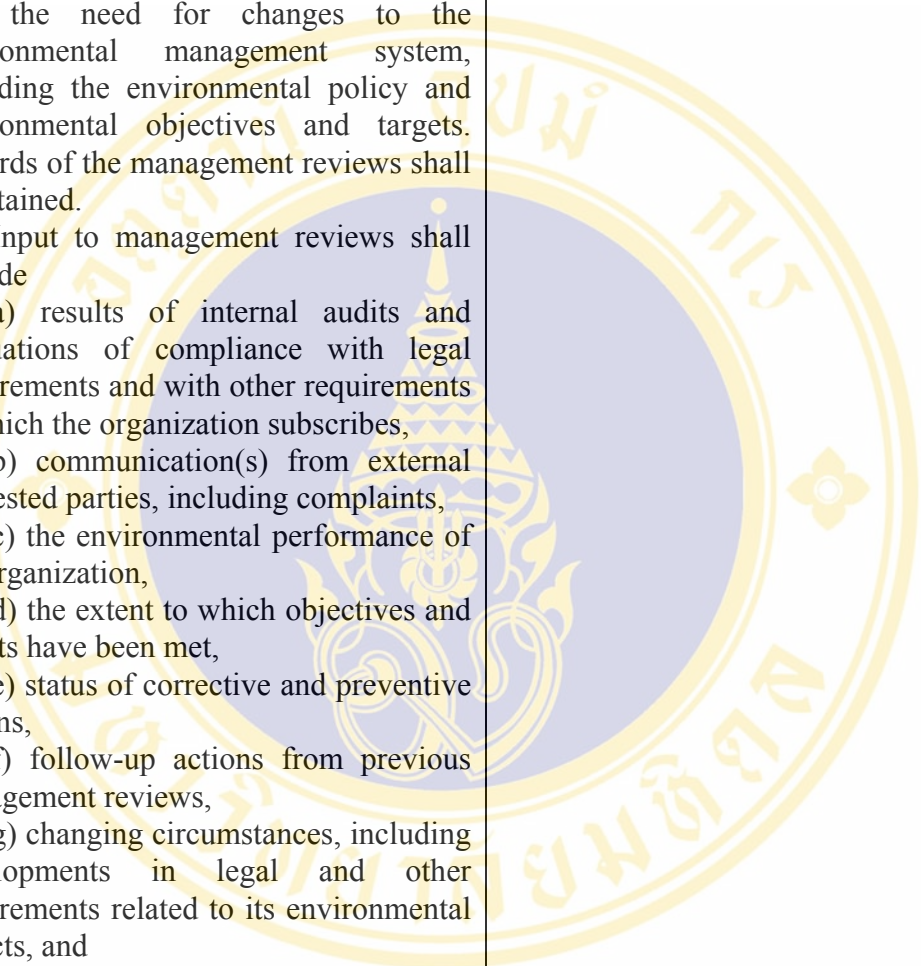
ISO 14001	Blue Flag
<p>legible and readily identifiable,</p> <p>f) ensure that documents of external origin determined by the organization to be necessary for the planning and operation of the environmental management system are identified and their distribution controlled, and</p> <p>g) prevent the unintended use of obsolete documents and apply suitable identification to them if they are retained for any purpose.</p>	
<p>4.6 Operational control</p> <p>The organization shall identify and plan those operations that are associated with the identified significant environmental aspects consistent with its environmental policy, objectives and targets, in order to ensure that they are carried out under specified conditions, by</p> <p>a) establishing, implementing and maintaining a documented procedure(s) to control situations where their absence could lead to deviation from the environmental policy, objectives and targets, and</p> <p>b) stipulating the operating criteria in the procedure(s), and</p> <p>c) establishing, implementing and maintaining procedures related to the identified significant environmental aspects of goods and services used by the organization and communicating applicable procedures and requirements to suppliers, including contractors.</p>	<p>4.6 Operational control shall be identified as follows:</p> <ol style="list-style-type: none"> 1. water quality using EU Bathing Water Directive, 2. waste water using EU Urban Wastewater Directive, 3. no direct discharge of industrial or sewage water in the sea, 4. no litter collected at the beach area 5. establish emergency plan 6. establish the procedure for warning on pollution or emergency situation 7. conduct the document and signboard on natural area and advices on how to behave in such areas. 8. display as close to the Blue Flag as possible information about Blue Flag, 9. indicate the withdrawal of Blue Flag certification due to nonconformity of the requirements, 10. local community and the beach operator should together be able to demonstrate that at least 5 environmental education activities are offered. 11. establish communication center on environmental information, Blue Flag data and services. 12. land-use and development plan for its coastal zone should be conducted. 13. litter should be disposed as the following:

ISO 14001	Blue Flag
	<ol style="list-style-type: none"> 1. no remains from animals and plants, a daily beach clean during the bathing season when necessary 2. provide litterbins in adequate numbers and reuse 3. litter collecting system 14. on the beach, there will be no: <ol style="list-style-type: none"> 1. driving unless specifically authorised 2. car races 3. unauthorised camping 4. dumping 15. on the beach, there will be: <ol style="list-style-type: none"> 1. safety system 2. manage the land-use plan for activities and formulate the access road within the area properly, 3. signboard on water quality, Blue Flag and requirements in the form of table or figure 4. litterbins 5. beach operator 6. first aid center, lifesaving equipment 7. telephone 8. facilities and directions for people with disabilities i.e., ramps to the beach, toilet, tourist information. 9. a shielded source of drinking water 10. all buildings and equipment of the beach must be properly maintained, 11. strict requirements for dog control including other animals
<p>4.7 Emergency preparedness and response The organization shall establish, implement and maintain a procedure(s) to identify potential emergency situations and potential accidents that can have an impact(s) on the environment and how it will respond to them.</p>	<p>4.7 Plan in rural level and/or national level shall be implemented to cope with the emergency situation which impact to environment by :</p> <ul style="list-style-type: none"> - Prompt public warning if the beach or part thereof is expected to or has become grossly polluted or otherwise unsafe

ISO 14001	Blue Flag
<p>The organization shall respond to actual emergency situations and accidents and prevent or mitigate associated adverse environmental impacts.</p> <p>The organization shall periodically review and, where necessary, revise its emergency preparedness and response procedures, in particular, after the occurrence of accidents or emergency situations.</p> <p>The organization shall also periodically test such procedures where practicable.</p>	
<p>5 Checking</p>	<p>5.</p>
<p>5.1 Monitoring and measurement</p> <p>The organization shall establish, implement and maintain a procedure(s) to monitor and measure, on a regular basis, the key characteristics of its operations that can have a significant environmental impact. The procedure(s) shall include the documenting of information to monitor performance, applicable operational controls and conformity with the organization's environmental objectives and targets.</p> <p>The organization shall ensure that calibrated or verified monitoring and measurement equipment is used and maintained and shall retain associated records.</p>	<p>5.1 Checking is identified in water quality.</p>
<p>5.2 Evaluation of compliance</p> <p>a) Consistent with its commitment to compliance, the organization shall establish, implement and maintain a procedure(s) for periodically evaluating compliance with applicable legal requirements.</p> <p>The organization shall keep records of the results of the periodic evaluations.</p> <p>b) The organization shall evaluate compliance with other requirements to which it subscribes. The organization may</p>	<p>5.2 Checking is identified in water quality.</p>

ISO 14001	Blue Flag
<p>wish to combine this evaluation with the evaluation of legal compliance or to establish a separate procedure(s). The organization shall keep records of the results of the periodic evaluations.</p>	
<p>5.3 Nonconformity, corrective action and preventive action The organization shall establish, implement and maintain a procedure(s) for dealing with actual and potential nonconformity(ies) and for taking corrective action and preventive action. The procedure(s) shall define requirements for</p> <ul style="list-style-type: none"> a) identifying and correcting nonconformity(ies) and taking action(s) to mitigate their environmental impacts, b) investigating nonconformity (ies), determining their cause(s) and taking actions in order to avoid their recurrence, c) evaluating the need for action(s) to prevent nonconformity(ies) and implementing appropriate actions designed to avoid their occurrence, d) recording the results of corrective action(s) and preventive action(s) taken, and e) reviewing the effectiveness of corrective action(s) and preventive action(s) taken. <p>Actions taken shall be appropriate to the magnitude of the problems and the environmental impacts encountered. The organization shall ensure that any necessary changes are made to environmental management system documentation.</p>	<p>5.3 Identified in the water quality investigation and withdrawal due to nonconformity</p>
<p>5.4 Control of records The organization shall establish and maintain records as necessary to demonstrate conformity to the requirements of its environmental management system and of this International Standard, and the results</p>	<p>5.4 Unidentified in the requirements</p>

ISO 14001	Blue Flag
<p>achieved.</p> <p>The organization shall establish, implement and maintain a procedure(s) for the identification, storage, protection, retrieval, retention and disposal of records.</p> <p>Records shall be and remain legible, identifiable and traceable.</p>	
<p>5.5 Internal audit</p> <p>The organization shall ensure that internal audits of the environmental management system are conducted at planned intervals to</p> <p>a) determine whether the environmental management system</p> <p>1) conforms to planned arrangements for environmental management including the requirements of this International Standard, and</p> <p>2) has been properly implemented and is maintained, and</p> <p>b) provide information on the results of audits to management.</p> <p>Audit programme(s) shall be planned, established, implemented and maintained by the organization, taking into consideration the environmental importance of the operation(s) concerned and the results of previous audits.</p> <p>Audit procedure(s) shall be established, implemented and maintained that address</p> <ul style="list-style-type: none"> - the responsibilities and requirements for planning and conducting audits, reporting results and retaining associated records, - the determination of audit criteria, scope, frequency and methods. <p>Selection of auditors and conduct of audits shall ensure objectivity and the impartiality of the audit process.</p>	5.5 Unidentified in the requirements
<p>6. Management review</p> <p>Top management shall review the organization's environmental management</p>	6. Unidentified in the requirements

ISO 14001	Blue Flag
<p>system, at planned intervals, to ensure its continuing suitability, adequacy and effectiveness. Reviews shall include assessing opportunities for improvement and the need for changes to the environmental management system, including the environmental policy and environmental objectives and targets. Records of the management reviews shall be retained.</p> <p>Input to management reviews shall include</p> <ul style="list-style-type: none"> a) results of internal audits and evaluations of compliance with legal requirements and with other requirements to which the organization subscribes, b) communication(s) from external interested parties, including complaints, c) the environmental performance of the organization, d) the extent to which objectives and targets have been met, e) status of corrective and preventive actions, f) follow-up actions from previous management reviews, g) changing circumstances, including developments in legal and other requirements related to its environmental aspects, and h) recommendations for improvement. <p>The outputs from management reviews shall include any decisions and actions related to possible changes to environmental policy, objectives, targets and other elements of the environmental management system, consistent with the commitment to continual improvement.</p>	

4.2 Draft of environmental management system requirements for sustainable tourist attractions (Bang Saen beach)

To apply ISO 14001 and Blue Flag be a guide to develop environmental management system requirements for sustainable tourist attractions (Bang Saen beach), the researcher conducted and improved a draft in order to the completion of requirements. The details are as follows:

Draft environmental management system requirements for Beach

1. General requirements

The organization shall establish, document, implement, maintain and continually improve an environmental management system in accordance with the requirements of this standard and determine how it will fulfil these requirements.

The organization shall define and document the scope of its environmental management system.

2 Environmental policy

Top management shall define the organization's environmental policy and ensure that, within the defined scope of its environmental management system, it

- a) is appropriate to the nature, scale and environmental impacts of its activities, products and services,
- b) includes a commitment to continual improvement and prevention of pollution,
- c) includes a commitment to comply with applicable legal requirements and with other requirements to which the organization subscribes which relate to its environmental aspects,
- d) provides the framework for setting and reviewing environmental objectives and targets,
- e) is documented, implemented and maintained,
- f) is communicated to all persons working for or on behalf of the organization,
- g) is available to the public.

3 Planning

3.1 Environmental aspects

The organization shall establish, implement and maintain a procedure(s)

a) to identify the environmental aspects of its activities, products and services within the defined scope of the environmental management system that it can control and those that it can influence taking into account planned or new developments, or new or modified activities, products and services, and

b) to determine those aspects that has or can have significant impact(s) on the environment (i.e. significant environmental aspects). The organization shall document this information and keep it up to date. The organization shall ensure that the significant environmental aspects are taken into account in establishing, implementing and maintaining its environmental management system.

3.2 Legal and other requirements

The organization shall establish, implement and maintain a procedure(s)

a) to identify and have access to the applicable legal requirements and other requirements to which the organization subscribes related to its environmental aspects,

b) to determine how these requirements apply to its environmental aspects.

c) to identify and implement the requirements for water quality in the beach,

d) to identify and implement the requirements for water treatment in the beach,

e) to identify and seriously implement the requirements for dog control and other animals in the beach.

The organization shall ensure that these applicable legal requirements and other requirements to which the organization subscribes are taken into account in establishing, implementing and maintaining its environmental management system.

3.3 Objectives, targets and programme(s)

The organization shall establish, implement and maintain documented environmental objectives and targets, at relevant functions and levels within the organization.

The objectives and targets shall be measurable, where practicable, and consistent with the environmental policy, including the commitments to prevention of pollution, to compliance with applicable legal requirements and with other requirements to which the organization subscribes, and to continual improvement.

When establishing and reviewing its objectives and targets, an organization shall take into account the legal requirements and other requirements to which the organization subscribes, and its significant environmental aspects. It shall also consider its technological options, its financial, operational and business requirements, and the views of interested parties.

The organization shall establish, implement and maintain a programme(s) for achieving its objectives and targets. Programme(s) shall include

- a) designation of responsibility for achieving objectives and targets at relevant functions and levels of the organization, and
- b) the means and time-frame by which they are to be achieved.

4. Implementation and operation

4.1 Resources, roles, responsibility and authority

Management shall ensure the availability of resources essential to establish, implement, maintain and improve the environmental management system. Resources include human resources and specialized skills, organizational infrastructure, technology and financial resources.

Roles, responsibilities and authorities shall be defined, documented and communicated in order to facilitate effective environmental management.

The organization's top management shall appoint a specific management representative(s) who, irrespective of other responsibilities, shall have defined roles, responsibilities and authority for

- a) ensuring that an environmental management system is established, implemented and maintained in accordance with the requirements of this standard,
- b) reporting to top management on the performance of the environmental management system for review, including recommendations for improvement.

4.2 Competence, training and awareness

The organization shall ensure that any person(s) performing tasks for it or on its behalf that have the potential to cause a significant environmental impact (s) identified by the organization is (are) competent on the basis of appropriate education, training or experience, and shall retain associated records.

The organization shall identify training needs associated with its environmental aspects and its environmental management system. It shall provide training or take other action to meet these needs, and shall retain associated records.

The organization shall establish, implement and maintain a procedure(s) to make persons working for it or on its behalf aware of

- a) the importance of conformity with the environmental policy and procedures and with the requirements of the environmental management system,
- b) the significant environmental aspects and related actual or potential impacts associated with their work, and the environmental benefits of improved personal performance,
- c) their roles and responsibilities in achieving conformity with the requirements of the environmental management system, and
- d) the potential consequences of departure from specified procedures.

4.3 Communication

With regard to its environmental aspects and environmental management system, the organization shall establish, implement and maintain a procedure(s) for

- a) internal communication among the various levels and functions of the organization,
- b) receiving, documenting and responding to relevant communication from external interested parties.
- c) establish communication center on environmental information,
- d) warning the public on environmental deterioration and pollution,
- e) publicly display on the water quality in the form of a table or figure that can be easily understood,
- f) publicly display on standard system,
- g) clearly inform the requirements for each area, and
- h) conduct the document on natural area and guidance

The organization shall decide whether to communicate externally about its significant environmental aspects, and shall document its decision. If the decision is to communicate, the organization shall establish and implement a method(s) for this external communication.

4.4 Documentation

The environmental management system documentation shall include

- a) the environmental policy, objectives and targets,
- b) description of the scope of the environmental management system,
- c) description of the main elements of the environmental management system and their interaction, and reference to related documents,
- d) documents, including records, required by this standard, and
- e) documents, including records, determined by the organization to be necessary to ensure the effective planning, operation and control of processes that relate to its significant environmental aspects.
- f) emergency plan,
- g) environmental information about natural sensitive or ecosystem, requirements and implement method.

4.5 Control of documents

Documents required by the environmental management system and by this standard shall be controlled. Records are a special type of document and shall be controlled in accordance with the requirements.

The organization shall establish, implement and maintain a procedure(s) to

- a) approve documents for adequacy prior to issue,
- b) review and update as necessary and re-approve documents,
- c) ensure that changes and the current revision status of documents are identified,
- d) ensure that relevant versions of applicable documents are available at points of use,
- e) ensure that documents remain legible and readily identifiable,
- f) ensure that documents of external origin determined by the organization to be necessary for the planning and operation of the environmental management system are identified and their distribution controlled, and
- g) prevent the unintended use of obsolete documents and apply suitable identification to them if they are retained for any purpose.

4.6 Operational control

The organization shall identify and plan those operations that are associated with the identified significant environmental aspects consistent with its environmental policy, objectives and targets, in order to ensure that they are carried out under specified conditions, by

- a) establishing, implementing and maintaining a documented procedure(s) to control situations where their absence could lead to deviation from the environmental policy, objectives and targets,
- b) stipulating the operating criteria in the procedure(s),
- c) establishing, implementing and maintaining procedures related to the identified significant environmental aspects of goods and services used by the organization and communicating applicable procedures and requirements to suppliers, including contractors,
- d) identify the inspection on the seawater quality in the beach according to legal and requirements,
- e) implement the procedures apply for water quality by using a wastewater treatment well as identified in law,
- f) no direct discharge of industrial, sewage and toilet water in the sea,
- g) no litter collected in the beach area,
- h) indicate the recall of certification due to inobservance the rules or requirements,
- i) formulate land-use plan for coastal area,
- j) litter bins in adequate numbers that are properly secured and regularly maintained, emptied and reused,
- k) safety system in the beach,
- l) manage the land-use utilization for activities and formulate the access road within the area properly,
- m) signboard on the seawater quality and tourist guidance,
- n) beach guards, first aid, lifesaving equipment and easy access to a telephone,
- o) facilities and directions for people with disabilities i.e., ramps to the beach, toilet, tourist information. All buildings and equipment of the beach must be properly maintained,
- p) a shielded source of drinking water,
- q) no driving, car races, camping, and dumping on the beach

4.7 Emergency preparedness and response

The organization shall establish, implement and maintain a procedure(s) to identify potential emergency situations and potential accidents that can have an impact(s) on the environment and how it will respond to them.

The organization shall respond to actual emergency situations and accidents and prevent or mitigate associated adverse environmental impacts.

The organization shall periodically review and, where necessary, revise its emergency preparedness and response procedures, in particular, after the occurrence of accidents or emergency situations.

The organization shall also periodically test such procedures where practicable.

- a) conduct emergency plan
- b) establish the procedure for warning on pollution or emergency situation

5 Checking

5.1 Monitoring and measurement

The organization shall establish, implement and maintain a procedure(s) to monitor and measure, on a regular basis, the key characteristics of its operations that can have a significant environmental impact. The procedure(s) shall include the documenting of information to monitor performance, applicable operational controls and conformity with the organization's environmental objectives and targets.

The organization shall ensure that calibrated or verified monitoring and measurement equipment is used and maintained and shall retain associated records.

5.2 Evaluation of compliance

a) Consistent with its commitment to compliance, the organization shall establish, implement and maintain a procedure(s) for periodically evaluating compliance with applicable legal requirements.

The organization shall keep records of the results of the periodic evaluations.

b) The organization shall evaluate compliance with other requirements to which it subscribes. The organization may wish to combine this evaluation with the evaluation of legal compliance or to establish a separate procedure(s).

The organization shall keep records of the results of the periodic evaluations.

5.3 Nonconformity, corrective action and preventive action

The organization shall establish, implement and maintain a procedure(s) for dealing with actual and potential nonconformity (ies) and for taking corrective action and preventive action. The procedure(s) shall define requirements for

a) identifying and correcting nonconformity(ies) and taking action(s) to mitigate their environmental impacts,

- b) investigating nonconformity (ies), determining their cause(s) and taking actions in order to avoid their recurrence,
- c) evaluating the need for action(s) to prevent nonconformity(ies) and implementing appropriate actions designed to avoid their occurrence,
- d) recording the results of corrective action(s) and preventive action(s) taken, and
- e) reviewing the effectiveness of corrective action(s) and preventive action(s) taken.

Actions taken shall be appropriate to the magnitude of the problems and the environmental impacts encountered.

The organization shall ensure that any necessary changes are made to environmental management system documentation.

5.4 Control of records

The organization shall establish and maintain records as necessary to demonstrate conformity to the requirements of its environmental management system and of this standard, and the results achieved.

The organization shall establish, implement and maintain a procedure(s) for the identification, storage, protection, retrieval, retention and disposal of records.

Records shall be and remain legible, identifiable and traceable.

5.5 Internal audit

The organization shall ensure that internal audits of the environmental management system are conducted at planned intervals to

- a) determine whether the environmental management system
 - 1) conforms to planned arrangements for environmental management including the requirements of this standard, and
 - 2) has been properly implemented and is maintained, and
- b) provide information on the results of audits to management.

Audit programme(s) shall be planned, established, implemented and maintained by the organization, taking into consideration the environmental importance of the operation(s) concerned and the results of previous audits.

Audit procedure(s) shall be established, implemented and maintained that address

- the responsibilities and requirements for planning and conducting audits, reporting results and retaining associated records,

- the determination of audit criteria, scope, frequency and methods.

Selection of auditors and conduct of audits shall ensure objectivity and the impartiality of the audit process.

6. Management review

Top management shall review the organization's environmental management system, at planned intervals, to ensure its continuing suitability, adequacy and effectiveness. Reviews shall include assessing opportunities for improvement and the need for changes to the environmental management system, including the environmental policy and environmental objectives and targets. Records of the management reviews shall be retained.

Input to management reviews shall include

- a) results of internal audits and evaluations of compliance with legal requirements and with other requirements to which the organization subscribes,
- b) communication(s) from external interested parties, including complaints,
- c) the environmental performance of the organization,
- d) the extent to which objectives and targets have been met,
- e) status of corrective and preventive actions,
- f) follow-up actions from previous management reviews,
- g) changing circumstances, including developments in legal and other requirements related to its environmental aspects, and
- h) recommendations for improvement.

The outputs from management reviews shall include any decisions and actions related to possible changes to environmental policy, objectives, targets and other elements of the environmental management system, consistent with the commitment to continual improvement.

4.3 Draft of administrative organizations model for environmental management system for the beach

To administrate the environmental management system for the beach towards objective efficiently, the researcher established a draft of administrative organizations model for environmental management system for the beach in order to be a guide for the experts to consider the proper structure of local administrative organizations. The proposed committee shall be divided into 2 levels.

4.3.1 Committee of environmental management system for tourist attractions at national level

Consists of

- Office of Tourism Development, Ministry of Tourism and Sports
- Tourism Authority of Thailand
- Department of Provincial Administration
- Pollution Control Department
- Department of Environmental Quality Promotion
- Office of Environmental Policy and Planning
- Tourism Industry Board of Thailand
- Bureau of the Budget

Duties

1. Formulate policy and development
2. Support and develop the system
3. Establish and improve requirements be appropriate and up to date
4. Set up the Committee at provincial level to evaluate and give certification to local administrative organizations

4.3.2 Committee of environmental management system for tourist attractions at provincial level

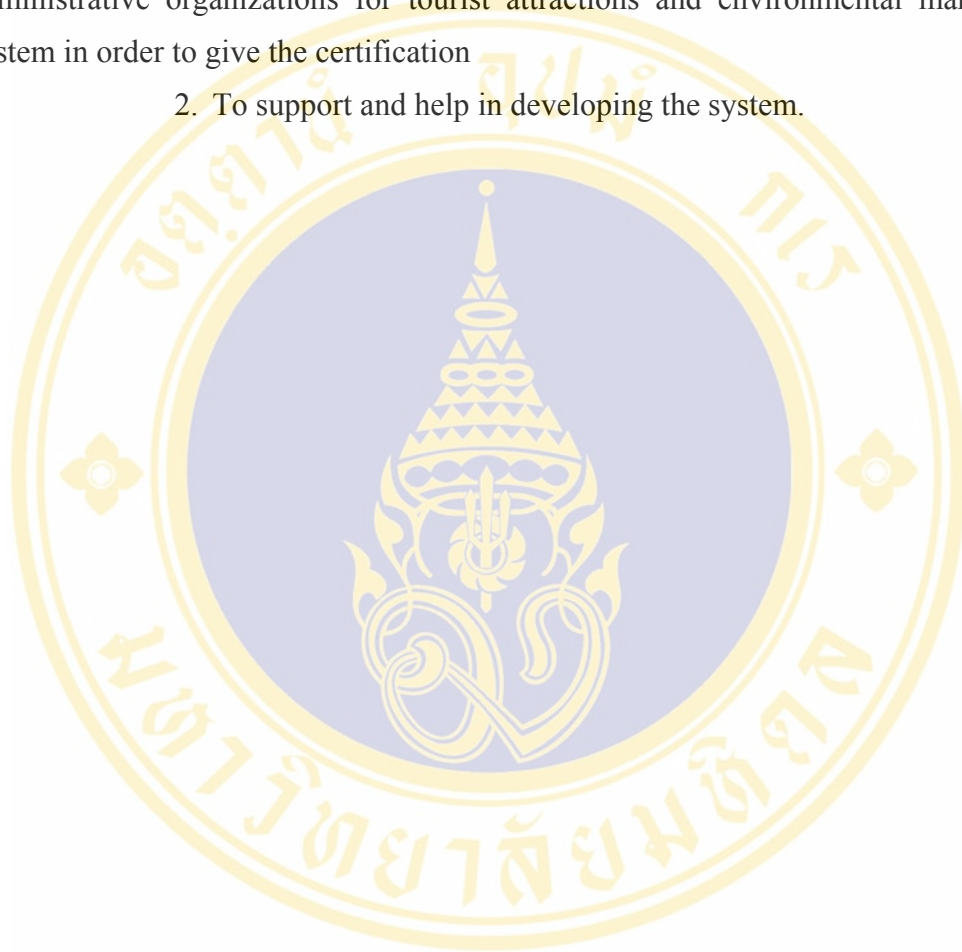
Consists of

- Representatives of Tourism Authority of Thailand
- Representatives of provincial agencies
- Representatives of institutes in the area

This Committee shall be approved by the Committee environmental management system for tourist attractions at national level

Duties

1. To assess the compliance between the administration of local administrative organizations for tourist attractions and environmental management system in order to give the certification
2. To support and help in developing the system.



Draft of administrative organizations model for environmental management system for tourist attractions (the beach)

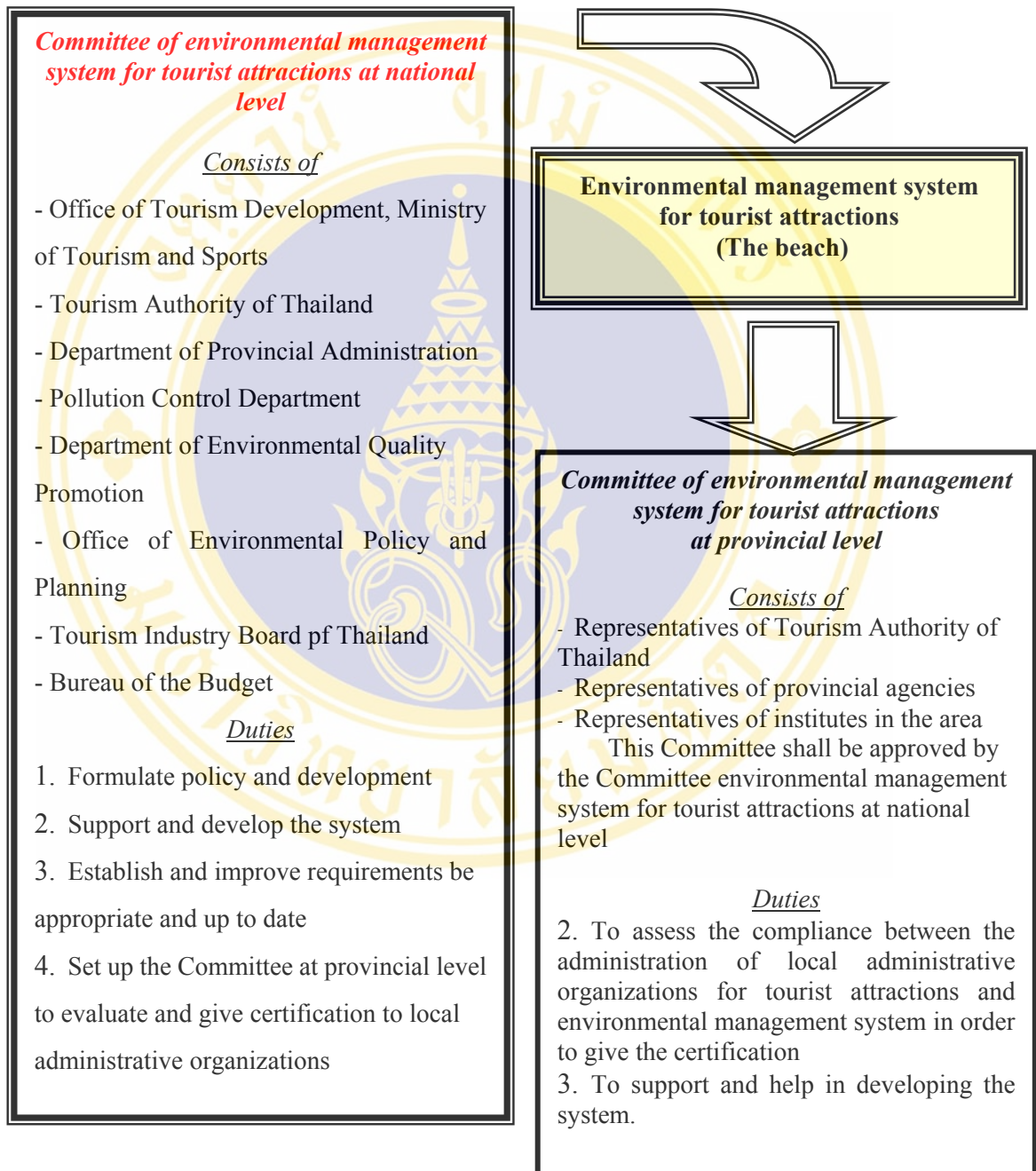


Figure 4.1 Draft of administrative organizations model

4.4 Results of Delphi Technique

4.4.1 General information of experts

In order to establish the proper requirements for implementation, the researcher determined the number of experts to 38 persons by divided into experts in tourism (19 persons) and in standard (19 persons). The comments and recommendations of these experts were developed for the requirements. The information of experts is as follows:

- **Gender** The experts were classified by sex: female 14 persons (36.84%) and male 24 persons (63.16%).
- **Education level** The experts were classified by education levels: 16 persons (42.10%) of bachelor's degree, 21 persons (55.27%) of master's degree and 1 person (2.63%) of doctoral degree.
- **Experience** The experts were classified by working period: 1-10 years for 3 persons (7.90%), 11-20 years for 23 persons (60.52%) and 21-30 years for 12 persons (31.58%).

Table 4.4.1 General information of experts

General information of experts	Number of experts	Percentage
Number of all experts	38	100.00
<u>Gender</u>		
Female	14	36.84
Male	24	63.16
<u>Experience</u>		
1-10 years	3	7.90
11-20 years	23	60.52
21-30 years	12	31.58
<u>Education level</u>		
Bachelor's degree	16	42.10
Master's degree	21	55.27
Doctoral degree	1	2.63

4.4.2 The first comment of experts

4.4.2.1 Properness in technique and method

From the questionnaires, 32 experts (84.21%) agreed with the properness in technique and method applied for developing the requirements, but 6 experts gave the comment that it should be improved by identify an indicator of main content or aspect, e.g. criteria or indicator on water quality as proposed to swimming or other activities.

Table 4.4.2.1 Properness in technique and method

Properness in technique and method	Number of experts	Percentage
Proper	32	84.21
Improper/ should improve	6	15.79
Total	38	100.00

4.4.2.2 Properness in content and scope

From the questionnaires on properness in content and scope, most of experts (35 persons or 92.10%) thought that the content and scope of the requirements are appropriate, but 3 experts (7.90%) noted that they should be improved due to broad and not specify content. It should identify development means according to ISO 14001 and its procedures for tourist attraction by added in appendix or supplement part.

Table 4.4.2.2 Properness in content and scope

Properness in content and scope	Number of experts	Percentage
Proper	35	92.10
Improper/ should improve	3	7.90
Total	38	100.00

4.4.2.3 Properness in tourism market and demand

Most of experts (37 persons or 97.37%) commented that the implementation as identified in the requirements will advantage for tourism market (be a selling point). An expert or 2.63% commented it should be improved by developing environmental management system to be gained widespread acceptance both national and international levels.

Table 4.4.2.3 Properness in tourism market and demand

Properness in tourism market and demand	Number of experts	Percentage
Proper	37	97.37
Improper/ should improve	1	2.63
Total	38	100.00

4.4.2.4 Properness in role and duty of local administrative organizations

Fifteen experts or 39.47% thought there is properness in role and duty of local administrative organizations and most of experts (23 persons or 60.53%) thought that it is improper and should be improved. In this connection, the researcher asked the additional question for the reason in implementation, the reason was indicated that the requirements should be managed by the person who has knowledge and experience in standard to achieve the objectives. Most of local administrative organizations haven't experts in standard; besides, the organizations might not take an interest in practice because there is no incentive or order from their authority.

Table 4.4.2.4 Properness in role and duty of local administrative organizations

Properness in role and duty of local administrative organizations	Number of experts	Percentage
Proper	15	39.47
Improper/ should improve	23	60.53
Total	38	100.00

4.4.2.5 Properness in management structure of local administrative organizations

The below table shows the comment of 8 experts (21%) agreed with the properness in management structure of local administrative organizations, 30 experts (79%) thought it is improper and should be improved. According to the requirements, the implementation related to several sections, branches and divisions causes a lack of unity for administration, especially the administrator hasn't an attention to continually implement. It will make a failure to achieve the objectives. Furthermore, some people thought that standard system is not still interesting for local administrative organizations.

Table 4.4.2.5 Properness in management structure of local administrative organizations

Properness in management structure of local administrative organizations	Number of experts	Percentage
Proper	8	21.00
Improper/ should improve	30	79.00
Total	38	100.00

4.4.2.6 Properness of organization model in administrating the system

Most of experts (32 persons or 84.21%) thought that organizations administrate this system should be from governmental sector. Members in committee should be representatives from government, private agencies in tourism sector. 6 experts or 15.79% thought the organizations should be from other agencies such as philanthropic foundation in order to independent working.

Table 4.4.2.6 Properness of organizations model for administrating the system

Properness of organizations model for administrating the system	Number of experts	Percentage
Governmental sector	32	84.21
Private sector	0	0
Others	6	15.79
Total	38	100.00

4.4.2.7 Properness of key agency in implementing

The table 4.4.2.7 indicated that 17 experts or 44.73% thought the key agency should be the Ministry of Tourism and Sports, Tourism Authority of Thailand for 10 persons or 26.31%, Department of Provincial Administration for 5 persons or 13.16% and philanthropic foundation for the other 6 persons or 15.80% respectively.

Table 4.4.2.7 Properness of key agency in implementing

Properness of key agency in implementing	Number of experts	Percentage
Ministry of Tourism and Sports	17	44.74
Tourism Authority of Thailand	10	26.31
Ministry of Natural Resource and Environment	0	0
Department of Provincial Administration	5	13.16
Others	6	15.79
Total	38	100.00

4.4.2.8 Properness in setting administrative organizations

From the questionnaire, found most of experts (32 persons or 84.20%) agreed with the properness in setting the administrative organizations at national and provincial levels, 6 persons or 15.80% disagreed and recommended the model of administrative organizations by setting only the committee at national level, For the evaluation in ISO 14000, there is the agency which is responsible for evaluation and certification, therefore this agency should evaluate this system as well. Because the framework of this system is developed from ISO 14001, the evaluation process shall be the same process. Furthermore, it will create the credibility, deduction of manpower responsibility, understanding of the system, including role and duty as the consultant of the system.

Table 4.4.2.8 Properness in setting administrative organizations

Properness in setting administrative organizations	Number of experts	Percentage
Agree	32	84.21
Disagree	6	15.79
Total	38	100.00

4.4.2.9 Properness of organizations in evaluation and certification

From the questionnaire, 15 experts (39.47%) agreed with properness of the committee at national level in evaluation and certification, 23 experts (60.53%) disagreed and recommended the development means to consider the supplement committee as follows:

- Committee on tourism, e.g. Ministry of Tourism and Sports, Tourism Authority of Thailand and Tourism Industry of Thailand
- Committee on environment, e.g. Pollution Control Department, Department of Environmental Quality Promotion and Office of Environmental Policy and Planning
- Committee on administration, supervision and establishment of development means for local administrative organization e.g. Department of Provincial Administration, Office of National Economic and Social Development Board and Bureau of the Budget
- Committee on standard, e.g. Thai Industrial Standards Institute
- Committee from education institutes
- Committee on area management, e.g. Department of Town and Country Planning, Siam Architect association and The Harbour Department

Table 4.4.2.9 Properness of organizations in evaluation and certification

Properness of organizations in evaluation and certification	Number of experts	Percentage
Agree	15	39.47
Disagree	23	60.53
Total	38	100.00

4.4.2.10 Properness of the committee at provincial level

From the questionnaire, 14 experts or 36.84% agreed with model of the committee at provincial level and 24 experts or 63.16% disagreed and recommended the means to consider the related organizations as follows:

- Committee at provincial level should be compliant with the committee at national level by co-members
- It should increase the number of representatives from community, private sector and environmental foundation to participate in this committee.
- Or, it should not have this committee but it should apply the assessment of ISO 14001 which use the third party to evaluate and certificate.

Table 4.4.2.10 Properness of the committee at provincial level

Properness of the committee at provincial level	Number of experts	Percentage
Agree	14	36.84
Disagree	24	63.16
Total	38	100.00

4.4.2.11 Properness in function of the committee at national level

From the questionnaire, the function was determined for the committee at national level in order to develop, improve, establish the requirements, help the member, guarantee to the committee at regional level and set up the sub-committee on technique to recommend on implementation. Most of experts (33 persons or 86.84%) agreed with the function, 5 experts or 13.16% disagreed and gave an additional issue. That is the committee at national level should participate in giving a recommendation to Bureau of the Budget, the Office of National Economic and Social Development Board in considering annual budget and task force budget for local administrative organizations which implements efficiently, takes part in this program, and/or awards the certification.

Table 4.4.2.11 Properness in function of the committee at national level

Properness in function of the committee at national level	Number of experts	Percentage
Agree	33	86.84
Disagree	5	13.16
Total	38	100.00

4.4.2.12 Properness in function of the committee at provincial level

From the questionnaire, the function was determined for the committee at provincial level in order to help the member, evaluate compliance with the requirements, recommend and suggest the development means and improvement to the committee at national level, set up the sub-committee on technique to recommend on implementation. Most of experts (30 persons or 79 %) agreed and 8 experts or 21% disagreed and gave an additional issue. That is this committee should participate in giving a recommendation to local administration organizations (district and province) in establishment of development plan, especially development in tourism and other concerns. Besides, some experts thought the committee at provincial is unnecessary for this function.

Table 4.4.2.12 Properness of function of the committee at provincial level

Properness in function of the committee at national level	Number of experts	Percentage
Agree	30	79
Disagree	8	21
Total	38	100.00

4.4.3 The second comment of experts

4.4.3.1 Properness in technique and method

From the 2nd questionnaires, found that all experts (38 persons or 100%) agreed with the properness in technique and method which are applied to be an instrument of tourism resource development.

Table 4.4.3.1 Properness in technique and method

Properness in technique and method	Number of experts	Percentage
Proper	38	100.00
Improper/ should improve	0	0
Total	38	100.00

4.4.3.2 Properness in content and scope

From the questionnaire on properness in content and scope, most of experts (37 persons or 97.37%) thought the content and scope of the requirements are appropriate, but an expert (2.63%) noted that they should be improved to ease understanding, including explanation to avoid misunderstanding.

Table 4.4.3.2 Properness in content and scope

Properness in content and scope	Number of experts	Percentage
Proper	37	97.37
Improper/ should improve	1	2.63
Total	38	100.00

4.4.3.3 Properness in tourism market and demand

Most of experts (37 persons or 97.37%) thought it is proper and comment that the implementation as identified in the requirements shall advantage for tourism market (be a selling point), one expert or 2.63% thought that it is improper.

Table 4.4.3.3 Properness in tourism market and demand

Properness in tourism market and demand	Number of experts	Percentage
Proper	37	97.37
Improper/ should improve	1	2.63
Total	38	100.00

4.4.3.4 Properness in role and duty of local administrative organizations

Most of experts (36 persons or 94.74%) thought there is properness in role and duty of local administrative organizations, and 2 persons or 5.26% thought that it is improper and they recommended the system should be managed by person who has knowledge and experience on standard in order to achieve the objectives. But most of local administrative organizations haven't this kind of people.

Table 4.4.3.4 Properness in role and duty of local administrative organizations

Properness in role and duty of local administrative organizations	Number of experts	Percentage
Proper	36	94.74
Improper/ should improve	2	5.26
Total	38	100.00

4.4.3.5 Properness in management structure of local administrative organizations

The below table shows the management structure of local administrative organizations is proper by the comment of 2 experts or 5.26%. Most of experts (36 persons or 94.74%) thought it is improper and should be improved.

According to the requirements, the implementation related to several sections, branches and divisions causes a lack of unity for administration, especially the administrator hasn't an attention to continually implement. It will make a failure to achieve the objectives. Furthermore, some people thought the standard system is not still interesting for local administrative organizations. Under the current administration, the experts recommended that the implementation will be efficient, the local

administrative organizations shall propose a project and make a request for budget as same as other project, besides work plan and responsible staff should be determined clearly. All these will be supported by administrator and department.

Table 4.4.3.5 Properness in management structure of local administrative organizations

Properness in management structure of local administrative organizations	Number of experts	Percentage
Proper	2	5.26
Improper/ should improve	36	94.74
Total	38	100.00

4.4.3.6 Properness of organizations model in administrating the system

Most of experts (37 persons or 97.37%) thought the organizations administrating this system should be from governmental sector. Because the standard puts emphasis on tourist attraction administrated by government agencies. Besides, the supervisory committee should be consist of representatives from governmental and private sectors. One expert or 2.63% thought the organizations should be from other agencies such as philanthropic foundation in order to independent working.

Table 4.4.3.6 Properness of organizations model in administrating the system

Properness of organizations model for administrating the system	Number of experts	Percentage
Governmental sector	37	97.37
Private sector	0	0
Others	1	2.63
Total	38	100.00

4.4.3.7 Properness of key agency in implementing

The table 4.4.3.7 indicated that 36 experts or 94.74% thought the key agency should be the Ministry of Tourism and Sports, Tourism Authority of Thailand for one

experts or 2.63%, and philanthropic foundation for the other expert or 2.63% due to independent working.

Table 4.4.3.7 Properness of key agency in implementing

Properness of key agency in implementing	Number of experts	Percentage
Ministry of Tourism and Sports	36	44.74
Tourism Authority of Thailand	1	2.63
Ministry of Natural Resource and Environment	0	0
Department of Provincial Administration	0	0
Others	1	2.63
Total	38	100.00

4.4.3.8 Properness in setting the administrative organizations

From the questionnaire, found 2 experts or 5.26% agreed with the properness in setting administrative organizations at national and provincial levels, 36 persons or 94.74% disagreed and recommended that the model of administrative organizations should set up only the committee at national level. In the part of evaluation and certification should be the responsibility of the current agency which evaluates and gives certification under ISO 14000 system. Because the framework of this system is developed from ISO 14001, the evaluation process should be the same as other systems in order to credibility, deduction of manpower responsibility, understanding the system of provincial agencies, including role and duty as the consultant of the system.

Table 4.4.3.8 Properness in setting administrative organizations

Properness in setting administrative organizations	Number of experts	Percentage
Agree	36	94.74
Disagree	2	5.26
Total	38	100.00

4.4.3.9 Properness of organizations in evaluation and certification

From the questionnaire, all experts (38 persons or 100%) disagreed and recommended the development means to consider the supplement committee as follows:

- Committee on tourism, e.g. Ministry of Tourism and Sports, Tourism Authority of Thailand and Tourism Industry of Thailand
- Committee on environment, e.g. Pollution Control Department, Department of Environmental Quality Promotion and Office of Environmental Policy and Planning
- Committee on administration, supervision and establishment of the development means for local administrative organizations e.g. Department of Provincial Administration, Office of National Economic and Social Development Board and Bureau of the Budget
- Committee on standard, e.g. Thai Industrial Standards Institute
- Committee from education institutes
- Committee on area management, e.g. Department of Town and Country Planning, Siam Architect association and The Harbour Department

Table 4.4.3.9 Properness of organizations in evaluation and certification

Properness of organizations in evaluation and certification	Number of experts	Percentage
Agree	0	0
Disagree	38	100.00
Total	38	100.00

4.4.3.10 Properness of the committee at provincial level

From the questionnaire, 38 experts or 100% disagreed and recommended that this committee should not be established, besides it should use the evaluation of ISO14001 which has third party to evaluate and certificate. It will make the system creditable and acceptable, as well as deduction of manpower responsibility and understanding the content and method.

Table 4.4.3.10 Properness of the committee at provincial level

Properness of the committee at provincial level	Number of experts	Percentage
Agree	0	0
Disagree	38	100.00
Total	38	100.00

4.4.3.11 Properness in function of the committee at national level

From the questionnaire, the function was determined for the committee at national level in order to develop, improve, establish the requirements, help the member, set up the sub-committee on technique to recommend on implementation. All experts (38 persons or 100%) agreed and recommended to add duty of this committee. That is the committee should participate in giving a recommendation to Bureau of the Budget, the Office of National Economic and Social Development Board in considering annual budget and task force budget for local administrative organization which implements efficiently, takes part in this program and/or awards the certification.

Table 4.4.3.11 Properness in function of the committee at national level

Properness in function of the committee at national level	Number of experts	Percentage
Agree	38	100.00
Disagree	0	0
Total	38	100.00

4.4.3.12 Properness of function of the committee at provincial level

For the questionnaire concerns properness of determine the committee function in order to help the member, evaluate compliance with the requirements, recommend and suggest the development and improvement to the committee at national level, set up the sub-committee on technique to recommend on implementation. All experts (38 person or 100%) disagreed and gave the additional issue. That is the committee should participate in giving a recommend to local administration organizations, e.g. district and province in establishment of development plan, especially development in

tourism and other concerns. Some experts gave comment that the committee at provincial is unnecessary to be identified for this function.

Table 4.4.3.12 Properness of function of the committee at provincial level

Properness in function of the committee at national level	Number of experts	Percentage
Agree	38	100.00
Disagree	0	0
Total	38	100.00

4.5 Environmental management system requirements for sustainable tourist attractions (Bang Saen beach)

From the study on Delphi technique to conduct requirements, the researcher improved requirements to comply with the study results, the details are as follows:

Environmental management system requirements for sustainable tourist attractions (Bang Saen beach)

1. General requirements

The organization shall establish, document, implement, maintain and continually improve an environmental management system in accordance with the requirements of this International Standard and determine how it will fulfil these requirements.

The organization shall define and document the scope of its environmental management system.

2 Environmental policy

Top management shall define the organization's environmental policy and ensure that, within the defined scope of its environmental management system, it

- a) is appropriate to the nature, scale and environmental impacts of its activities, products and services,
- b) includes a commitment to continual improvement and prevention of pollution,
- c) includes a commitment to comply with applicable legal requirements and with other requirements to which the organization subscribes which relate to its environmental aspects,
- d) provides the framework for setting and reviewing environmental objectives and targets,
- e) is documented, implemented and maintained,
- f) is communicated to all persons working for or on behalf of the organization, and
- g) is available to the public.

3 Planning

3.1 Environmental aspects

The organization shall establish, implement and maintain a procedure(s)

a) to identify the environmental aspects of its activities, products and services within the defined scope of the environmental management system that it can control and those that it can influence taking into account planned or new developments, or new or modified activities, products and services, and

b) to determine those aspects that have or can have significant impact(s) on the environment (i.e. significant environmental aspects). The organization shall document this information and keep it up to date. The organization shall ensure that the significant environmental aspects are taken into account in establishing, implementing and maintaining its environmental management system.

3.2 Legal and other requirements

The organization shall establish, implement and maintain a procedure(s)

a) to identify and have access to the applicable legal requirements and other requirements to which the organization subscribes related to its environmental aspects,

b) to determine how these requirements apply to its environmental aspects.

The organization shall ensure that these applicable legal requirements and other requirements to which the organization subscribes are taken into account in establishing, implementing and maintaining its environmental management system.

Please see the additional data in appendix.

3.3 Objectives, targets and programme(s)

The organization shall establish, implement and maintain documented environmental objectives and targets, at relevant functions and levels within the organization.

The objectives and targets shall be measurable, where practicable, and consistent with the environmental policy, including the commitments to prevention of pollution, to compliance with applicable legal requirements and with other requirements to which the organization subscribes, and to continual improvement.

When establishing and reviewing its objectives and targets, an organization shall take into account the legal requirements and other requirements to which the organization subscribes, and its significant environmental aspects. It shall also consider

its technological options, its financial, operational and business requirements, and the views of interested parties.

The organization shall establish, implement and maintain a programme(s) for achieving its objectives and targets. Programme(s) shall include

- a) designation of responsibility for achieving objectives and targets at relevant functions and levels of the organization, and
- b) the means and time-frame by which they are to be achieved.

4. Implementation and operation

4.1 Resources, roles, responsibility and authority

Management shall ensure the availability of resources essential to establish, implement, maintain and improve the environmental management system. Resources include human resources and specialized skills, organizational infrastructure, technology and financial resources.

Roles, responsibilities and authorities shall be defined, documented and communicated in order to facilitate effective environmental management.

The organization's top management shall appoint a specific management representative(s) who, irrespective of other responsibilities, shall have defined roles, responsibilities and authority for

- a) ensuring that an environmental management system is established, implemented and maintained in accordance with the requirements of this International Standard,
- b) reporting to top management on the performance of the environmental management system for review, including recommendations for improvement.

4.2 Competence, training and awareness

The organization shall ensure that any person(s) performing tasks for it or on its behalf that have the potential to cause a significant environmental impact(s) identified by the organization is (are) competent on the basis of appropriate education, training or experience, and shall retain associated records.

The organization shall identify training needs associated with its environmental aspects and its environmental management system. It shall provide training or take other action to meet these needs, and shall retain associated records.

The organization shall establish, implement and maintain a procedure(s) to make persons working for it or on its behalf aware of

- a) the importance of conformity with the environmental policy and procedures and with the requirements of the environmental management system,
- b) the significant environmental aspects and related actual or potential impacts associated with their work, and the environmental benefits of improved personal performance,
- c) their roles and responsibilities in achieving conformity with the requirements of the environmental management system, and
- d) the potential consequences of departure from specified procedures.

4.3 Communication

With regard to its environmental aspects and environmental management system, the organization shall establish, implement and maintain a procedure(s) for

- a) internal communication among the various levels and functions of the organization,
- b) receiving, documenting and responding to relevant communication from external interested parties.

The organization shall decide whether to communicate externally about its significant environmental aspects, and shall document its decision. If the decision is to communicate, the organization shall establish and implement a method(s) for this external communication.

Please see the addition data in appendix.

4.4 Documentation

The environmental management system documentation shall include

- a) the environmental policy, objectives and targets,
- b) description of the scope of the environmental management system,
- c) description of the main elements of the environmental management system and their interaction, and reference to related documents,
- d) documents, including records, required by this International Standard, and
- e) documents, including records, determined by the organization to be necessary to ensure the effective planning, operation and control of processes that relate to its significant environmental aspects.

Please see the addition data in appendix.

4.5 Control of documents

Documents required by the environmental management system and by this International Standard shall be controlled. Records are a special type of document and shall be controlled in accordance with the requirements.

The organization shall establish, implement and maintain a procedure(s) to

- a) approve documents for adequacy prior to issue,
- b) review and update as necessary and re-approve documents,
- c) ensure that changes and the current revision status of documents are identified,
- d) ensure that relevant versions of applicable documents are available at points of use,
- e) ensure that documents remain legible and readily identifiable,
- f) ensure that documents of external origin determined by the organization to be necessary for the planning and operation of the environmental management system are identified and their distribution controlled, and
- g) prevent the unintended use of obsolete documents and apply suitable identification to them if they are retained for any purpose.

4.6 Operational control

The organization shall identify and plan those operations that are associated with the identified significant environmental aspects consistent with its environmental policy, objectives and targets, in order to ensure that they are carried out under specified conditions, by

- a) establishing, implementing and maintaining a documented procedure(s) to control situations where their absence could lead to deviation from the environmental policy, objectives and targets,
- b) stipulating the operating criteria in the procedure(s),
- c) establishing, implementing and maintaining procedures related to the identified significant environmental aspects of goods and services used by the organization and communicating applicable procedures and requirements to suppliers, including contractors,

Please see the addition data in appendix.

4.7 Emergency preparedness and response

The organization shall establish, implement and maintain a procedure(s) to identify potential emergency situations and potential accidents that can have an impact(s) on the environment and how it will respond to them.

The organization shall respond to actual emergency situations and accidents and prevent or mitigate associated adverse environmental impacts.

The organization shall periodically review and, where necessary, revise its emergency preparedness and response procedures, in particular, after the occurrence of accidents or emergency situations.

The organization shall also periodically test such procedures where practicable.
Please see the addition data in appendix.

5 Checking

5.1 Monitoring and measurement

The organization shall establish, implement and maintain a procedure(s) to monitor and measure, on a regular basis, the key characteristics of its operations that can have a significant environmental impact. The procedure(s) shall include the documenting of information to monitor performance, applicable operational controls and conformity with the organization's environmental objectives and targets.

The organization shall ensure that calibrated or verified monitoring and measurement equipment is used and maintained and shall retain associated records.

5.2 Evaluation of compliance

a) Consistent with its commitment to compliance, the organization shall establish, implement and maintain a procedure(s) for periodically evaluating compliance with applicable legal requirements.

The organization shall keep records of the results of the periodic evaluations.

b) The organization shall evaluate compliance with other requirements to which it subscribes. The organization may wish to combine this evaluation with the evaluation of legal compliance or to establish a separate procedure(s).

The organization shall keep records of the results of the periodic evaluations.

5.3 Nonconformity, corrective action and preventive action

The organization shall establish, implement and maintain a procedure(s) for dealing with actual and potential nonconformity (ies) and for taking corrective action and preventive action. The procedure(s) shall define requirements for

- a) identifying and correcting nonconformity(ies) and taking action(s) to mitigate their environmental impacts,
- b) investigating nonconformity (ies), determining their cause(s) and taking actions in order to avoid their recurrence,
- c) evaluating the need for action(s) to prevent nonconformity(ies) and implementing appropriate actions designed to avoid their occurrence,
- d) recording the results of corrective action(s) and preventive action(s) taken, and
- e) reviewing the effectiveness of corrective action(s) and preventive action(s) taken.

Actions taken shall be appropriate to the magnitude of the problems and the environmental impacts encountered.

The organization shall ensure that any necessary changes are made to environmental management system documentation.

5.4 Control of records

The organization shall establish and maintain records as necessary to demonstrate conformity to the requirements of its environmental management system and of this International Standard, and the results achieved.

The organization shall establish, implement and maintain a procedure(s) for the identification, storage, protection, retrieval, retention and disposal of records.

Records shall be and remain legible, identifiable and traceable.

5.5 Internal audit

The organization shall ensure that internal audits of the environmental management system are conducted at planned intervals to

- a) determine whether the environmental management system
 - 1) conforms to planned arrangements for environmental management including the requirements of this International Standard, and
 - 2) has been properly implemented and is maintained, and
- b) provide information on the results of audits to management.

Audit programme(s) shall be planned, established, implemented and maintained by the organization, taking into consideration the environmental importance of the operation(s) concerned and the results of previous audits.

Audit procedure(s) shall be established, implemented and maintained that address

- the responsibilities and requirements for planning and conducting audits, reporting results and retaining associated records,
- the determination of audit criteria, scope, frequency and methods.

Selection of auditors and conduct of audits shall ensure objectivity and the impartiality of the audit process.

6. Management review

Top management shall review the organization's environmental management system, at planned intervals, to ensure its continuing suitability, adequacy and effectiveness. Reviews shall include assessing opportunities for improvement and the need for changes to the environmental management system, including the environmental policy and environmental objectives and targets. Records of the management reviews shall be retained.

Input to management reviews shall include

- a) results of internal audits and evaluations of compliance with legal requirements and with other requirements to which the organization subscribes,
- b) communication(s) from external interested parties, including complaints,
- c) the environmental performance of the organization,
- d) the extent to which objectives and targets have been met,
- e) status of corrective and preventive actions,
- f) follow-up actions from previous management reviews,
- g) changing circumstances, including developments in legal and other requirements related to its environmental aspects, and
- h) recommendations for improvement.

The outputs from management reviews shall include any decisions and actions related to possible changes to environmental policy, objectives, targets and other elements of the environmental management system, consistent with the commitment to continual improvement.

Appendix of environmental management system requirements for the beach

To implement in compliant with requirements of environmental management system for sustainable development and appropriate characteristics of tourist attractions especially beach, some requirements should be added as follows:

1. Add the following requirements in 3.2 Legal and other requirements

- 1.1 Water quality must be in compliance with requirements and standards of the EU Bathing Water Directive,
- 1.2 Waste water treatment must be in compliance with requirements of the EU Urban Waste Water Directive, and
- 1.3 National laws concerning dogs and other animals must be strictly enforced on the beach.

2. Add the following requirements in 4.3 Communication

- 2.1 Establish communication center on environment and tourist information,
- 2.2 Prompt public warning if the beach or part thereof is expected to or has become grossly polluted or otherwise unsafe,
- 2.3 Publicly display on the water quality in the form of a table or figure that can be easily understood,
- 2.4 Publicly display on standard system,
- 2.5 Clearly inform the requirements for each area, and
- 2.6 Conduct the document and signboard on natural area and guidance

3. Add the following requirements in 4.4 Documentation

- 3.1 Emergency plan
- 3.2 Information on natural sensitive areas in the coastal zone, including its flora and fauna must be publicly displayed and included in tourist information.

4. Add the following requirements in 4.6 Operational control

- 4.1 Identify the inspection on the seawater quality in the beach according to legal and requirements,
- 4.2 Implement the procedures apply for water quality by using a wastewater treatment well as identified in concerned law,
- 4.3 No direct discharge of industrial, sewage and toilet water in the sea,

4.4 Indicate the recall of certification due to inobservance the rules or requirements,

4.5 Formulate land-use plan and development for coastal area, and no driving, car races, camping, and dumping on the beach,

4.6 No rubbish collected in the beach area, rubbish bins should be in adequate numbers that are properly secured and regularly maintained, emptied and reused,

4.7 Signboard on the seawater quality and tourist guidance,

4.8 Safety system in the beach, they should have beach grards, first aid, lifesaving equipment and easy access to a telephone, facilities and directions for people with disabilities i.e., ramps to the beach, toilet, tourist information. All buildings and equipment of the beach must be properly maintained, and

4.9 A shielded source of drinking water

5. Add the following requirements in 4.7 Emergency preparedness and respons

5.1 Conduct emergency plan

5.2 Establish the procedures for warning on pollution or emergency situation

4.6 Administrative organizations model for environmental management system for the beach

For the results of Delphi technique, the researcher brought information to improve the structure of administrative organizations to develop environmental management system for the beach. Ministry of Tourism and Sports should be formulated to be a key agency to manage the system and representatives from other governmental and private sectors should join together working in the form of committee on environmental management system for tourist attractions instead of the committee at provincial level which shall be cancelled. The committee on the system shall select education institutes or agencies (certification body) to evaluate environmental management system ISO14001 for tourist attractions.

Committee of environmental management system for tourist attractions at national level

Consists of

- Office of Tourism Development, Ministry of Tourism and Sports
- Tourism Authority of Thailand
- Department of Provincial Administration
- Pollution Control Department
- Department of Environmental Quality Promotion
- Office of Environmental Policy and Planning
- Tourism Industry Board of Thailand
- Bureau of the Budget

Duties

5. Formulate policy and development
6. Support and develop the system
7. Establish and improve requirements be appropriate and up to date
8. Consider and agree with institutes or agencies (certification body)

to evaluate the environmental management system ISO 14001 and certificate to local administrative organizations

Administration the system

The certification system administrated by the committee consists of representatives from government and private agencies as well as education institutes. The Department of Tourism Development is member and secretary of the committee to coordinate and administrate the implementation of the committee for certification efficiently.

The main responsibility of the committee is consideration on properness of the requirements in helping local administrative organization which participate in the program. The committee will provide some staffs for giving an advice on the implementation in order to request the certification or will recommend institutes which have potential to help local administrative organization in developing the system. The committee still approves evaluation agencies (Certification Body) by considered agencies which got an approval of the National Accreditation Council (NAC) due to the main structure of the system from Environmental Management System and to comply with the requirement of ISO 14001 as acceptable and creditable in international level, including decrease task in providing skilled person in evaluation.

At the beginning, the committee shall approve to certification body in every 2 years, and monitor and evaluation in every year at head office or branches as well as concealed monitor. Local administrative organization which was evaluated by this certification body will get the certificated period as suitable.

The government budget is essential for an administration of the environmental management system at the beginning. This is to support the implementation of the committee and local administrative organization and to comply with the requirements of the standard. The figure 4.1 shows the implementation procedure of local administrative organization to requesting the certification.

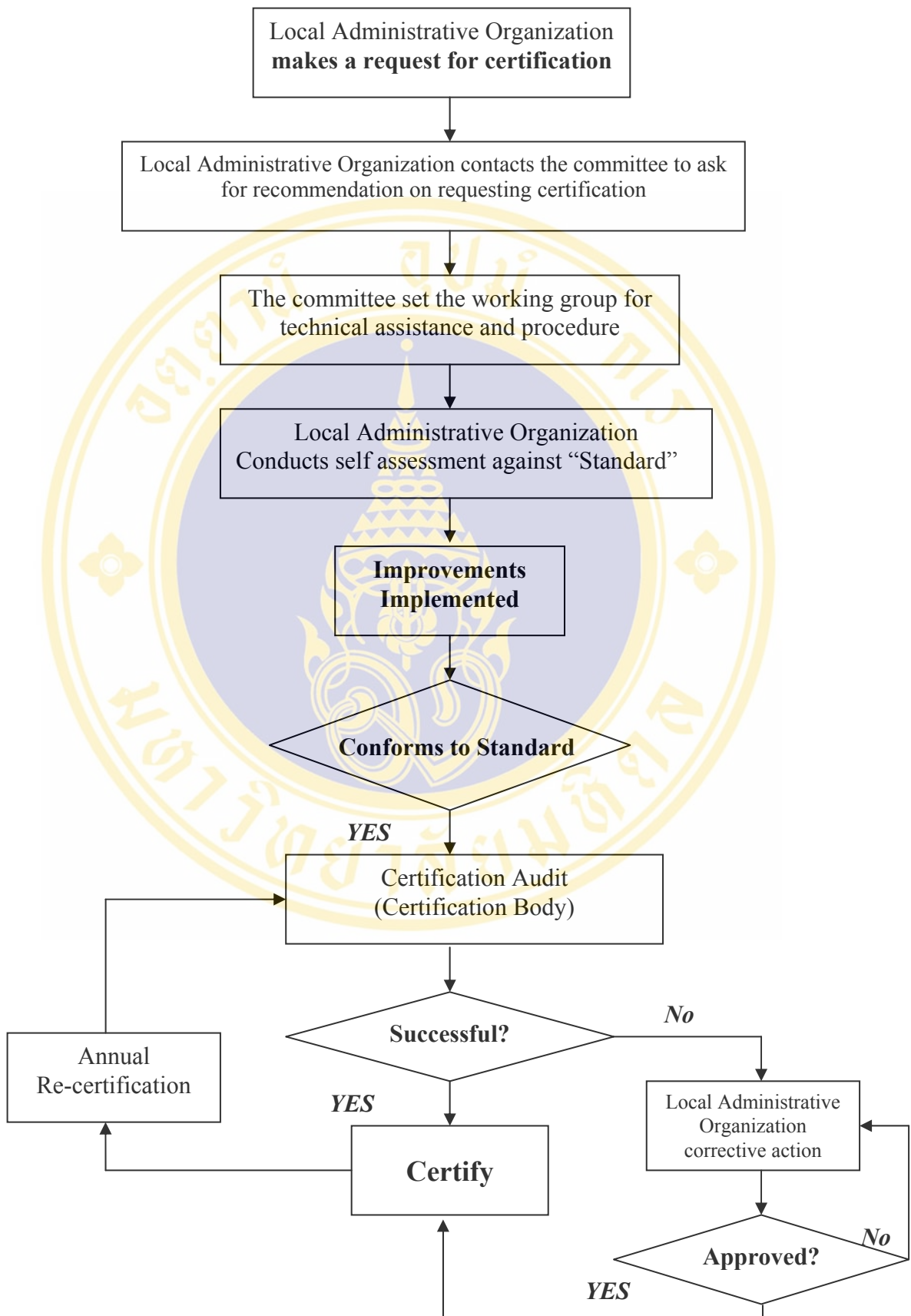


Figure 4.2 Certification procedure

4.7 Study on the compliance between the Municipality of Muang Saen Suk's administration for Bang Saen beach and environmental management system requirements to sustainable development

From the study on compliance between the Municipality of Muang Saen Suk's administration for Bang Saen beach and environmental management system requirements to sustainable development, found there are compliant as shown in the table below.

Table 4.5 Compliance between the Municipality of Muang Saen Suk's administration for Bang Saen beach and environmental management system requirements to sustainable development

Internal Audit Check Sheets

Check : Y; meets requirement
H; some meet requirement
N; nothing

2 . Environment Policy	Audit Questions	Check	Comments
<p>Top management shall define the organization's environmental policy and ensure that, within the defined scope of its environmental management system, it</p> <p>a) is appropriate to the nature, scale and environmental impacts of its activities, products and services,</p> <p>b) includes a commitment to continual improvement and prevention of pollution,</p> <p>c) includes a commitment to comply with applicable legal requirements and with other requirements to which the organization subscribes which relate to its environmental aspects,</p> <p>d) provides the framework for setting and reviewing environmental objectives and targets,</p> <p>e) is documented, implemented and maintained,</p> <p>f) is communicated to all persons working for or on behalf of the organization, and</p> <p>g) is available to the public.</p>	1.Has the environmental policy been defined and approved by top management?	Y	1
	2.Is the policy appropriate to the nature, scale and environmental impacts of its activities, products and services?	Y	1
	3.Does the policy includes a commitment to continual improvement and prevention of pollution?	H	0.5
	4.Does the policy includes a commitment to comply with applicable legal requirements and with other requirements to which the organization subscribes which relate to its environmental aspects?	H	0.5
	5.Is the policy documented, implemented and maintained?	Y	1
	6.Is the policy communicated to all persons working for or on behalf of the organization?	Y	1
Score : Y; 1 H; 0.5 N; 0		5/ 6 ☐ 100 = 83.33	

3.1 Environmental aspects	Audit Questions	Check	Comments
<p>The organization shall establish, implement and maintain a procedure(s)</p> <p>a) to identify the environmental aspects of its activities, products and services within the defined scope of the environmental management system that it can control and those that it can influence taking into account planned or new developments, or new or modified activities, products and services, and</p> <p>b) to determine those aspects that have or can have significant impact(s) on the environment (i.e. significant environmental aspects).</p> <p>The organization shall document this information and keep it up to date.</p> <p>The organization shall ensure that the significant environmental aspects are taken into account in establishing, implementing and maintaining its environmental management system.</p>	1. Has a procedure to to identify the environmental aspects of its activities, products and services that it can control and over which it can be expected to have an influence been developed?	N	0
	2. Does the organization determine those aspects that have or can have significant impact(s) on the environment (i.e. significant environmental aspects)?	H	0.5
	3. Does the organization shall document this information and keep it up to date?	N	0
	4. Does the organization shall ensure that the significant environmental aspects are taken into account in establishing, implementing and maintaining its environmental management system?	H	0.5
Score : Y; 1 H; 0.5 N; 0		1/4 <input type="checkbox"/> 100 = 25	

3.2 Legal and other requirements	Audit Questions	Check	Comments
<p>The organization shall establish, implement and maintain a procedure(s)</p> <p>a) to identify and have access to the applicable legal requirements and other requirements to which the organization subscribes related to its environmental aspects,</p> <p>b) to determine how these requirements apply to its environmental aspects.</p> <p>c) to identify and implement the requirements for water quality in the beach,</p> <p>d) to identify and implement the requirements for water treatment in the beach,</p> <p>e) to identify and seriously implement the requirements for dog control and other animals on the beach.</p> <p>The organization shall ensure that these applicable legal requirements and other requirements to which the organization subscribes are taken into account in establishing, implementing and maintaining its environmental management system.</p>	1. Has a procedure to identify and access to the applicable legal requirements and other requirements to which the organization subscribes related to its environmental aspects?	H	0.5
	2. Has a procedure to determine how these requirements apply to its environmental aspects	H	0.5
	3. Has a procedure to identify and implement the requirements for water quality in the beach?	Y	1
	4. Has a procedure to identify and implement the requirements for water treatment in the beach?	Y	1
	5. Has a procedure to identify and seriously implement the requirements for dog control and other animals on the beach?	Y	1
Score : Y; 1 H; 0.5 N; 0		4/5 <input type="checkbox"/> 100 = 80	

3.3 Objectives, targets and programme(s)	Audit Questions	Check	Comments
<p>The organization shall establish, implement and maintain documented environmental objectives and targets, at relevant functions and levels within the organization.</p> <p>The objectives and targets shall be measurable, where practicable, and consistent with the environmental policy, including the commitments to prevention of pollution, to compliance with applicable legal requirements and with other requirements to which the organization subscribes, and to continual improvement.</p> <p>When establishing and reviewing its objectives and targets, an organization shall take into account the legal requirements and other requirements to which the organization subscribes, and its significant environmental aspects. It shall also consider its technological options, its financial, operational and business requirements, and the views of interested parties.</p> <p>The organization shall establish, implement and maintain a programme(s) for achieving its objectives and targets. Programme(s) shall include</p> <p>a) designation of responsibility for achieving objectives and targets at relevant functions and levels of the organization, and</p> <p>b) the means and time-frame by which they are to be achieved.</p>	1. Has the organization establish, implement and maintain documented environmental objectives and targets, at relevant functions and levels within the organization?	Y	1
	2. Have the following areas been considered in the establishment of the environmental objectives and targets:	/	
	- consistent with the environmental policy?		
	- inclusive to the commitments to prevention of pollution?	Y	1
	- to compliance with applicable legal requirements and with other requirements to which the organization subscribes?	H	0.5
	- to continual improvement?	H	0.5
	- technological options?	H	0.5
	- financial requirements?	H	0.5
	-operational and business requirements?	H	0.5
	- views of interested parties?	H	0.5
3. Does the organization establish, implement and maintain a programme(s) for achieving its objectives and targets?	Y	1	
4. Does the organization establish designation of responsibility for achieving objectives and targets at relevant functions and levels of the organization?	Y	1	
5. Does the organization establish the means and time-frame by which they are to be achieved?	Y	1	
Score : Y; 1 H; 0.5 N; 0		9/ 12 ☐ 100 = 75	

4.1 Resources, roles, responsibility and authority	Audit Questions	Check	Comments
<p>Management shall ensure the availability of resources essential to establish, implement, maintain and improve the environmental management system. Resources include human resources and specialized skills, organizational infrastructure, technology and financial resources.</p> <p>Roles, responsibilities and authorities shall be defined, documented and</p>	1. Does the Management ensure the availability of resources essential to establish, implement, maintain and improve the environmental management system?	H	0.5
	2. Does the availability of human resources and specialized skills, organizational infrastructure,	Y	1

<p>communicated in order to facilitate effective environmental management.</p> <p>The organization's top management shall appoint a specific management representative(s) who, irrespective of other responsibilities, shall have defined roles, responsibilities and authority for</p> <p>a) ensuring that an environmental management system is established, implemented and maintained in accordance with the requirements of this International Standard,</p> <p>b) reporting to top management on the performance of the environmental management system for review, including recommendations for improvement.</p>	<p>technology and financial resources include?</p>		
	<p>3. Does the management identify roles, responsibilities and authorities shall be defined, documented and communicated in order to facilitate effective environmental management?</p>	Y	1
	<p>4. Does the organization's top management appoint a specific management representative(s) to manage environmental system efficiently?</p>	H	0.5
<p>Score : Y; 1 H; 0.5 N; 0</p>		<p>3 / 4 <input type="checkbox"/> 100 = 75</p>	

4.2 Competence, training and awareness	Audit Questions	Check	Comments	
<p>The organization shall ensure that any person(s) performing tasks for it or on its behalf that have the potential to cause a significant environmental impact(s) identified by the organization is (are) competent on the basis of appropriate education, training or experience, and shall retain associated records.</p> <p>The organization shall identify training needs associated with its environmental aspects and its environmental management system. It shall provide training or take other action to meet these needs, and shall retain associated records.</p> <p>The organization shall establish, implement and maintain a procedure(s) to make persons working for it or on its behalf aware of</p> <p>a) the importance of conformity with the environmental policy and procedures and with the requirements of the environmental management system,</p> <p>b) the significant environmental aspects and related actual or potential impacts associated with their work, and the environmental benefits of improved personal performance,</p> <p>c) their roles and responsibilities in achieving conformity with the requirements of the environmental management system, and</p> <p>d) the potential consequences of departure from specified procedures.</p>	<p>1. Has the organization identified training needs ?</p>	Y	1	
	<p>2. Have procedures for environmental training been established?</p>	H	0.5	
	<p>3. Do the procedures ensure that employees or members at each relevant function and level are aware of:</p>	/		
	<p>- the importance of conformity with the environmental policy and procedures and with the requirements of the environmental management system?</p>		H	0.5
	<p>- the significant environmental aspects and related actual or potential impacts associated with their work, and the environmental benefits of improved personal performance?</p>		H	0.5
	<p>- their roles and responsibilities in achieving conformity with the requirements of the environmental management system?</p>		H	0.5
	<p>- the potential consequences of departure from specified procedures?</p>		H	0.5
<p>Score : Y; 1 H; 0.5 N; 0</p>		<p>3.5 / 6 <input type="checkbox"/> 100 = 58.33</p>		

4.3 Communication	Audit Questions	Check	Comments	
<p>With regard to its environmental aspects and environmental management system, the organization shall establish, implement and maintain a procedure(s) for</p> <p>a) internal communication among the various levels and functions of the organization,</p> <p>b) receiving, documenting and responding to relevant communication from external interested parties.</p> <p>c) establish communication center on environmental information,</p> <p>d) warning the public on environmental deterioration and pollution,</p> <p>e) publicly display on the water quality in the form of a table or figure that can be easily understood,</p> <p>f) publicly display on standard system,</p> <p>g) clearly inform the requirements for each area, and</p> <p>h) conduct the document on natural area and guidance</p> <p>The organization shall decide whether to communicate externally about its significant environmental aspects, and shall document its decision. If the decision is to communicate, the organization shall establish and implement a method(s) for this external communication.</p>	1. Has the organization established and maintained procedures for :	/		
	- internal communication among the various levels and functions of the organization?		Y	1
	- receiving, documenting and responding to relevant communication from external interested parties?		Y	1
	- establish communication center on environmental information?		Y	1
	- warning the public on environmental deterioration and pollution?		N	0
	- publicly display on the water quality in the form of a table or figure that can be easily understood?		N	0
	- publicly display on standard system?		N	0
	- clearly inform the requirements for each area?		H	0.5
- conduct the document on natural area and guidance?	H	0.5		
Score : Y; 1 H; 0.5 N; 0		4 / 8 □ 100 = 50		

4.4 Documentation	Audit Questions	Check	Comments	
<p>The environmental management system documentation shall include</p> <p>a) the environmental policy, objectives and targets,</p> <p>b) description of the scope of the environmental management system,</p> <p>c) description of the main elements of the environmental management system and their interaction, and reference to related documents,</p> <p>d) documents, including records, required by this International Standard, and</p> <p>e) documents, including records, determined by the organization to be necessary to ensure the effective planning, operation and control of processes that relate to its significant environmental aspects.</p> <p>f) emergency plan,</p> <p>g) environmental information about natural sensitive or ecosystem, requirements and implement method.</p>	The documentation has described the environmental management system for:	/		
	- environmental policy, objectives and targets?		H	0.5
	- description of the scope of the environmental management system?		H	0.5
	- description of the main elements of the environmental management system and their interaction, and reference to related documents?		H	0.5
	- documents, including records, required by this International Standard?		N	0
	- documents, including records, determined by the organization to be necessary to ensure the effective planning, operation and control of processes that relate to its significant environmental aspects?		H	0.5

	- emergency plan,	H	0.5
	- environmental information about natural sensitive or ecosystem, requirements and implement method?	N	0
Score : Y; 1 H; 0.5 N; 0		2.5 / 7 \square 100 = 35.71	

4.5 Control of documents	Audit Questions	Check	Comments
<p>Documents required by the environmental management system and by this International Standard shall be controlled. Records are a special type of document and shall be controlled in accordance with the requirements.</p> <p>The organization shall establish, implement and maintain a procedure(s) to</p> <p>a) approve documents for adequacy prior to issue,</p> <p>b) review and update as necessary and re-approve documents,</p> <p>c) ensure that changes and the current revision status of documents are identified,</p> <p>d) ensure that relevant versions of applicable documents are available at points of use,</p> <p>e) ensure that documents remain legible and readily identifiable,</p> <p>f) ensure that documents of external origin determined by the organization to be necessary for the planning and operation of the environmental management system are identified and their distribution controlled, and</p> <p>g) prevent the unintended use of obsolete documents and apply suitable identification to them if they are retained for any purpose.</p>	The organization has established procedures for controlling all document as follows:		
	- approve documents for adequacy prior to issue?	Y	1
	- review and update as necessary and re-approve documents?	H	0.5
	- ensure that changes and the current revision status of documents are identified?	H	0.5
	- ensure that relevant versions of applicable documents are available at points of use?	H	0.5
	- ensure that documents remain legible and readily identifiable?	N	0
	- ensure that documents of external origin determined by the organization to be necessary for the planning and operation of the environmental management system are identified and their distribution controlled?	H	0.5
- prevent the unintended use of obsolete documents and apply suitable identification to them if they are retained for any purpose?	H	0.5	
Score : Y; 1 H; 0.5 N; 0		3.5 / 7 \square 100 = 50	

4.6 Operational control	Audit Questions	Check	Comments
<p>The organization shall identify and plan those operations that are associated with the identified significant environmental aspects consistent with its environmental policy, objectives and targets, in order to ensure that they are carried out under specified conditions, by</p> <p>a) establishing, implementing and maintaining a documented procedure(s) to control situations where their absence could</p>	the organization planned these activities, including maintenance, in order to ensure that they are carried out under specified conditions by		
	- establishing, implementing and maintaining a documented procedure(s) to control situations where their absence could lead to deviation from the environmental policy, objectives and targets?	Y	1

<p>lead to deviation from the environmental policy, objectives and targets,</p> <p>b) stipulating the operating criteria in the procedure(s),</p> <p>c) establishing, implementing and maintaining procedures related to the identified significant environmental aspects of goods and services used by the organization and communicating applicable procedures and requirements to suppliers, including contractors,</p> <p>d) identify the inspection on the seawater quality in the beach according to legal and requirements,</p> <p>e) implement the procedures apply for water quality by using a wastewater treatment well as identified in law,</p> <p>f) no direct discharge of industrial, sewage and toilet water in the sea,</p> <p>g) no rubbish collected in the beach area,</p> <p>h) indicate the recall of certification due to inobservance the rules or requirements,</p> <p>i) formulate land-use plan for coastal area,</p> <p>j) rubbish bins in adequate numbers that are properly secured and regularly maintained, emptied and reused,</p> <p>k) safety system in the beach,</p> <p>l) manage the land-use utilization for activities and formulate the access road within the area properly,</p> <p>m) signboard on the seawater quality and tourist guidance,</p> <p>n) beach grards, first aid, lifesaving equipment and easy access to a telephone,</p> <p>o) facilities and directions for people with disabilities i.e., ramps to the beach, toilet, tourist information. All buildings and equipment of the beach must be properly maintained,</p> <p>p) a shielded source of drinking water,</p> <p>q) no driving, car races, camping, and dumping on the beach</p>	- stipulating the operating criteria in the procedure(s)?	Y	1
	- establishing, implementing and maintaining procedures related to the identified significant environmental aspects of goods and services used by the organization and communicating applicable procedures and requirements to suppliers, including contractors?	Y	1
	- identify the inspection on the seawater quality in the beach according to legal and requirements?	Y	1
	- implement the procedures apply for water quality by using a wastewater treatment well as identified in law?	Y	1
	- no direct discharge of industrial, sewage and toilet water in the sea?	H	0.5
	- no rubbish collected in the beach area?	Y	1
	- indicate the recall of certification due to inobservance the rules or requirements?	N	0
	- formulate land-use plan for coastal area?	Y	1
	- rubbish bins in adequate numbers that are properly secured and regularly maintained, emptied and reused?	Y	1
	- safety system in the beach : beach grards, first aid, lifesaving equipment and easy access to a telephone?	Y	1
	- manage the land-use utilization for activities and formulate the access road within the area properly?	Y	1
	- signboard on the seawater quality and tourist guidance?	N	0
	- facilities and directions for people with disabilities i.e., ramps to the beach, toilet, tourist information. All buildings and equipment of the beach must be properly maintained,	Y	1
	- a shielded source of drinking water?	H	0.5
- no driving, car races, camping, and dumping on the beach?	Y	1	
Score : Y; 1 H; 0.5 N; 0		13/ 16 \square 100 = 81.25	

4.7 Emergency preparedness and response	Audit Questions	Check	Comments
The organization shall establish, implement and maintain a procedure(s) to identify potential emergency situations and potential accidents that can have an impact(s)	1. Has the organization established and maintained procedures to identify potential for respond accidents and emergency situations?	H	0.5

<p>on the environment and how it will respond to them.</p> <p>The organization shall respond to actual emergency situations and accidents and prevent or mitigate associated adverse environmental impacts.</p> <p>The organization shall periodically review and, where necessary, revise its emergency preparedness and response procedures, in particular, after the occurrence of accidents or emergency situations.</p> <p>The organization shall also periodically test such procedures where practicable.</p> <p>a) conduct emergency plan b) establish the procedure for warning on pollution or emergency situation</p>	2. Has the organization prepared the respond to actual emergency situations and accidents and prevent or mitigate associated adverse environmental impacts?	Y	1
	3. Have the emergency preparedness and response procedures been reviewed and the procedures were reviewed after the occurrence of any accidents or emergency situations?	Y	1
	4. Have any identified revisions been implemented?	Y	1
	5. Has the organization established the procedures for warning on pollution and emergency situation	H	0.5
Score : Y; 1 H; 0.5 N; 0			4 / 5 □ 100 = 80

5.1 Monitoring and measurement	Audit Questions	Check	Comments
<p>The organization shall establish, implement and maintain a procedure(s) to monitor and measure, on a regular basis, the key characteristics of its operations that can have a significant environmental impact. The procedure(s) shall include the documenting of information to monitor performance, applicable operational controls and conformity with the organization's environmental objectives and targets.</p> <p>The organization shall ensure that calibrated or verified monitoring and measurement equipment is used and maintained and shall retain associated records.</p>	1.Has the organization established and maintained documented procedures to monitor and measure on a regular basis the key characteristics of its operations and activities that can have a significant impact on the environment?	Y	1
	2. Has the organization established and maintained the documenting of information to monitor performance, applicable operational controls and conformity with the organization's environmental objectives and targets?	Y	1
	3. Has the organization calibrated or verified monitoring and measurement equipment is used and maintained and shall retain associated records?	Y	1
Score : Y; 1 H; 0.5 N; 0			3 / 3 □ 100 = 100

5.2 Evaluation of compliance	Audit Questions	Check	Comments
<p>a) Consistent with its commitment to compliance, the organization shall establish, implement and maintain a procedure(s) for periodically evaluating compliance with applicable legal requirements.</p> <p>The organization shall keep records of the results of the periodic evaluations.</p>	1. Has the organization established, implement and maintain a procedure(s) for periodically evaluating compliance with applicable legal requirements?	H	0.5
	2. Has the organization evaluated compliance with other requirements to which it subscribes?	H	0.5

<p>b) The organization shall evaluate compliance with other requirements to which it subscribes. The organization may wish to combine this evaluation with the evaluation of legal compliance or to establish a separate procedure(s).</p> <p>The organization shall keep records of the results of the periodic evaluations.</p>	3. Does the organization keep records of the results of the periodic evaluations?	H	0.5
Score : Y; 1 H; 0.5 N; 0			1.5/ 3 ☐ 100 = 50

5.3 Nonconformity, corrective action and preventive action	Audit Questions	Check	Comments
<p>The organization shall establish, implement and maintain a procedure(s) for dealing with actual and potential nonconformity (ies) and for taking corrective action and preventive action. The procedure(s) shall define requirements for</p> <p>a) identifying and correcting nonconformity(ies) and taking action(s) to mitigate their environmental impacts,</p> <p>b) investigating nonconformity (ies), determining their cause(s) and taking actions in order to avoid their recurrence,</p> <p>c) evaluating the need for action(s) to prevent nonconformity(ies) and implementing appropriate actions designed to avoid their occurrence,</p> <p>d) recording the results of corrective action(s) and preventive action(s) taken, and</p> <p>e) reviewing the effectiveness of corrective action(s) and preventive action(s) taken.</p> <p>Actions taken shall be appropriate to the magnitude of the problems and the environmental impacts encountered.</p> <p>The organization shall ensure that any necessary changes are made to environmental management system documentation.</p>	1. Has the organization established, implemented and maintained a procedure(s) for dealing with actual and potential nonconformity (ies) and for taking corrective action and preventive action?	H	0.5
	2. The procedure(s) are defined requirements for:	/	
	- identifying and correcting nonconformity(ies) and taking action(s) to mitigate their environmental impacts?		
	- investigating nonconformity (ies), determining their cause(s) and taking actions in order to avoid their recurrence?	H	0.5
	- evaluating the need for action(s) to prevent nonconformity(ies) and implementing appropriate actions designed to avoid their occurrence?	H	0.5
	- recording the results of corrective action(s) and preventive action(s) taken?	Y	1
	- reviewing the effectiveness of corrective action(s) and preventive action(s) taken?	Y	1
Score : Y; 1 H; 0.5 N; 0			4 / 6 ☐ 100 = 66.66

5.4 Control of records	Audit Questions	Check	Comments
<p>The organization shall establish and maintain records as necessary to demonstrate conformity to the requirements of its environmental management system and of this International Standard, and the results achieved.</p> <p>The organization shall establish, implement and maintain a procedure(s) for the identification, storage, protection, retrieval, retention and disposal of records.</p> <p>Records shall be and remain legible,</p>	1. Has the organization established and maintained records as necessary to demonstrate conformity to the requirements of its environmental management system and of this International Standard, and the results achieved?	H	0.5
	2. Has the organization established, implemented and maintained a procedure(s) for the identification,	H	0.5

identifiable and traceable	storage, protection, retrieval, retention and disposal of records?		
	3. Are the records legible, identifiable and traceable?	Y	1
Score : Y; 1 H; 0.5 N; 0			2 / 3 □ 100 = 66.66

5.5 Internal audit	Audit Questions	Check	Comments
<p>The organization shall ensure that internal audits of the environmental management system are conducted at planned intervals to</p> <p>a) determine whether the environmental management system</p> <p>1) conforms to planned arrangements for environmental management including the requirements of this International Standard, and</p> <p>2) has been properly implemented and is maintained, and</p> <p>b) provide information on the results of audits to management.</p> <p>Audit programme(s) shall be planned, established, implemented and maintained by the organization, taking into consideration the environmental importance of the operation(s) concerned and the results of previous audits.</p> <p>Audit procedure(s) shall be established, implemented and maintained that address</p> <ul style="list-style-type: none"> - the responsibilities and requirements for planning and conducting audits, reporting results and retaining associated records, - the determination of audit criteria, scope, frequency and methods. <p>Selection of auditors and conduct of audits shall ensure objectivity and the impartiality of the audit process.</p>	1. Has the organization conducted the plan on internal audits of the environmental management system?	H	0.5
	2. Has the organization planned, established, implemented an audit programme(s) by taking into consideration the environmental importance of the operation(s) concerned and the results of previous audits?	H	0.5
	3. Has The audit procedure(s) been established, implemented and maintained that address:		
	- the responsibilities and requirements for planning and conducting audits, reporting results and retaining associated records?	H	0.5
	- the determination of audit criteria, scope, frequency and methods?	H	0.5
Score : Y; 1 H; 0.5 N; 0			2 / 4 □ 100 = 50

6. Management review	Audit Questions	Check	Comments
<p>Top management shall review the organization's environmental management system, at planned intervals, to ensure its continuing suitability, adequacy and effectiveness. Reviews shall include assessing opportunities for improvement and the need for changes to the environmental management system, including the environmental policy and environmental objectives and targets. Records of the management reviews shall be retained.</p> <p>Input to management reviews shall include</p>	1. Has the top management reviewed the organization's environmental management system?	Y	1
	2. Do input to management reviews include:		
	- results of internal audits and evaluations of compliance with legal requirements and with other requirements to which the organization subscribes?	H	0.5
	- communication(s) from external interested parties, including complaints?	H	0.5

<p>a) results of internal audits and evaluations of compliance with legal requirements and with other requirements to which the organization subscribes,</p> <p>b) communication(s) from external interested parties, including complaints,</p> <p>c) the environmental performance of the organization,</p> <p>d) the extent to which objectives and targets have been met,</p> <p>e) status of corrective and preventive actions,</p> <p>f) follow-up actions from previous management reviews,</p> <p>g) changing circumstances, including developments in legal and other requirements related to its environmental aspects, and</p> <p>h) recommendations for improvement.</p> <p>The outputs from management reviews shall include any decisions and actions related to possible changes to environmental policy, objectives, targets and other elements of the environmental management system, consistent with the commitment to continual improvement.</p>	- the environmental performance of the organization?	H	0.5
	- the extent to which objectives and targets have been met?	H	0.5
	- status of corrective and preventive actions?	H	0.5
	- follow-up actions from previous management reviews?	H	0.5
	- changing circumstances, including developments in legal and other requirements related to its environmental aspects?	H	0.5
Score : Y; 1 H; 0.5 N; 0			4.5 / 8 \square 100 = 56.25

	Score
2. Environmental policy	83.33
3.1 Environmental aspects	25.00
3.2 Legal and other requirements	80.00
3.3 Objectives, targets and programme (s)	75.00
4.1 Resources, roles, responsibility and authority	75.00
4.2 Competence, training and awareness	58.33
4.3 Communication	50.00
4.4 Documentation	35.71
4.5 Control of documents	50.00
4.6 Operational control	81.25
4.7 Emergency preparedness and response	80.00
5.1 Monitoring and measurement	100.00
5.2 Evaluation of compliance	50.00
5.3 Nonconformity, corrective action and preventive action	66.67
5.4 Control of records	66.67
5.5 Internal audit	50.00
6. Management review	56.25

Total Score = 64.95

CHAPTER V

CONCLUSION

The study on development of environmental management system guidelines for sustainable tourist attractions: a case study of Bang Saen beach, Chonburi province has an objective to study the development mean of environmental management system for tourist attractions, including condition, limitation and constraint. The environmental management system is applied as guidance to determine tourism certification for tourist attractions in Thailand, especially beaches which administrated by local administrative organizations. These affect to the sustainable development for natural resources. Thus in this study, the researcher studies document on current standard and selected Environmental Management Standard ISO 14001 and International Certification program Blue Flag for the beach to be reference in conducting the environmental management system requirements of sustainable tourist attractions in the case of Bang Saen beach. Then the draft requirements was submitted to 38 experts in tourism and standard by using Delphi technique. The results from questionnaire and interview were criticized in form of statistic, frequency and percentage. For the data improvement, these were reprocessed using Delphi technique before evaluating the compliance with administration of the Municipality of Muang Saen Suk.

5.1 General Information of Experts

The experts group consists of 38 experts in tourism and standard, most of them are male, their working experience during 11-20 years and education level in Master's degree.

5.2 Results of 1st Delphi Technique

From the evaluation of properness in requirements by 1st Delphi technique , it found that:

1. Properness in technique and method

The experts have the comments that technique and method are proper about 84.21% and improper 15.79%.

2. Properness in content and scope

The experts have the comments that content and scope are proper about 92.10% and improper 7.90%.

3. Properness in tourism market and demand

The experts have the comments that tourism market and demand are proper about 97.37% and improper 2.63%.

4. Properness in role and duty of local administrative organizations

The experts have the comments that role and duty of local administrative organizations are proper about 39.47% and improper 60.53%.

5. Properness in management structure of local administrative organizations

The experts have the comment that management structure of local administrative organizations is proper about 21% and improper 79%.

6. Properness of organizations model in administrating the system

The experts have the comments that organizations model in administrating the system should be from government agencies 84.21% and other agencies 15.79%.

7. Properness in key agency in implementing

The experts have the comments that key agency in implementing should be the Ministry of Tourism and Sports about 44.74% , Tourism Authority of Thailand 26.31%, Department of Provincial Administration 13.16% and other agencies 15.79%.

8. Properness in setting administrative organizations

The experts agreed with setting administrative organizations 84.21% and disagreed 15.79%.

9. Properness of organizations in evaluation and certification

The experts agreed with the organizations in evaluation and certification 39.47% and disagreed 60.53%.

10. Properness of the committee at provincial level

The experts agreed with the committee at provincial level 36.84% and disagreed 63.16%.

11. Properness in function of the committee at national level

The experts agreed with the function of the committee at national level 86.84% and disagreed 13.16%.

12. Properness in function of the committee at provincial level

The experts agreed with the function of the committee at provincial level 79% and disagreed 21%.

5.3 Results of 2nd Delphi Technique

From the evaluation of properness in requirements by Delphi technique 2nd, it found that:

1. Properness in technique and method

The experts have the comments that technique and method are proper 100%.

2. Properness in content and scope

The experts have the comments that content and scope are proper about 97.37% and improper 2.63%.

3. Properness in tourism market and demand

The experts have the comments that tourism market and demand are proper about 97.37% and improper 2.63%.

4. Properness in role and duty of local administrative organizations

The experts have the comments that role and duty of local administrative organizations are proper about 94.74% and improper 5.26%.

5. Properness in management structure of local administrative organizations

The experts have the comment that management structure of local administrative organizations is proper about 5.26% and improper 94.74%.

6. Properness of organizations model in administrating the system

The experts have the comments that organizations model in administrating the system should be from government agencies 97.37% and other agencies 2.63%.

7. Properness in key agency in implementing

The experts have the comments that key agency in implementing should be the Ministry of Tourism and Sports about 94.74%, Tourism Authority of Thailand 2.63% and other agencies 2.63%.

8. Properness in setting administrative organizations

The experts agreed with setting administrative organizations 94.74% and disagreed 5.26%.

9. Properness of organizations in evaluation and certification

The experts agreed with the organizations in evaluation and certification 100% and disagreed 0%.

10. Properness of the committee at provincial level

The experts agreed with the committee at provincial level 100% and disagreed 63.16%.

11. Properness in function of the committee at national level

The experts agreed with the function of the committee at national level 100% and disagreed 0%.

12. Properness in function of the committee at provincial level

The experts agreed the function of the committee at provincial level 0 % and disagreed 100%.

5.4 Results to study the compliance

The requirements obtained from Delphi technique were experimented in study area (the Municipality of Muang Saen Suk). The meeting between administrator and concerned people in administrating Bang Saen beach was established to experiment the requirements both in field study and documentary. Then the researcher brought the results to evaluate in Check List as shown the following.

Standard requirements	Score
2. Environmental policy	83.33
3.1 Environmental aspects	25.00
3.2 Legal and other requirements	80.00
3.3 Objectives, targets and programme (s)	75.00
4.1 Resources, roles, responsibility and authority	75.00
4.2 Competence, training and awareness	58.33
4.3 Communication	50.00
4.4 Documentation	35.71

4.5 Control of documents	50.00
4.6 Operational control	81.25
4.7 Emergency preparedness and response	80.00
5.1 Monitoring and measurement	100.00
5.2 Evaluation of compliance	50.00
5.3 Nonconformity, corrective action and preventive action	66.67
5.4 Control of records	66.67
5.5 Internal audit	50.00
6. Management review	56.25
Total Score =	64.95

In summary, the results of this study revealed levels of the compliance between administration of the Municipality of Muang Saen Suk and environmental management system requirements for the beach about 64.95% of the total score of requirements. The minimum scores (which lower than 50%) are 25% for environmental aspect, and 35.71% for documentary.

5.5 Recommendations

5.5.1 Recommendations on developing the requirements

- 1) Master plan should be conducted to develop the standard and certification of the country, the certification logo should be established and applied for all activities, or applied with other standard logos for accreditation.
- 2) Indicator should be studied for other types of tourist attractions. Because its characteristics are different such as natural attraction and historical attraction.
- 3) Training staff of local administrative organizations at all levels to understand the environmental management system, its process and utilization.
- 4) Means of the study and requirements conduction could be developed to guidelines for implement of environmental management system.

5.5.2. Recommendations on structure of administrative organizations for certification.

- 1) Responsible staff should be determined by specifying the qualification on standard in order to manage the important tourist attractions in the country.
- 2) It should have government agency be responsible for evaluation and certification to local administrative organizations which can manage the tourist attractions to comply with the environmental management system requirements for tourist attractions.
- 3) Under administration of local administrative organizations, it should increase the participation of private sector or community in administration the system.

5.5.3 Suggest on next research

- 1) Internet system should be applied for data collecting and interview to experts or concerned people to gain the wide-spread comments.
- 2) Factors that motivate for using environmental management system requirements as an instrument for tourist attractions management in the country should be studied.

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WTO/OMT GLOBAL CODE OF ETHICS FOR TOURISM

[Article 1] Tourism's contribution to mutual understanding and respect between peoples and societies

1. The understanding and promotion of the ethical values common to humanity, with an attitude of tolerance and respect for the diversity of religious, philosophical and moral beliefs, are both the foundation and the consequence of responsible tourism; stakeholders in tourism development and tourists themselves should observe the social and cultural traditions and practices of all peoples, including those of minorities and indigenous peoples and to recognize their worth;

2. Tourism activities should be conducted in harmony with the attributes and traditions of the host regions and countries and in respect for their laws, practices and customs;

3. The host communities, on the one hand, and local professionals, on the other, should acquaint themselves with and respect the tourists who visit them and find out about their lifestyles, tastes and expectations; the education and training imparted to professionals contribute to a hospitable welcome;

4. It is the task of the public authorities to provide protection for tourists and visitors and their belongings; they must pay particular attention to the safety of foreign tourists owing to the particular vulnerability they may have; they should facilitate the introduction of specific means of information, prevention, security, insurance and assistance consistent with their needs; any attacks, assaults, kidnappings or threats against tourists or workers in the tourism industry, as well as the wilful destruction of tourism facilities or of elements of cultural or natural heritage should be severely condemned and punished in accordance with their respective national laws;

5. When travelling, tourists and visitors should not commit any criminal act or any act considered criminal by the laws of the country visited and abstain from any conduct felt to be offensive or injurious by the local populations, or likely to damage the local environment; they should refrain from all trafficking in illicit drugs, arms, antiques, protected species and products and substances that are dangerous or prohibited by national regulations;

6. Tourists and visitors have the responsibility to acquaint themselves, even before their departure, with the characteristics of the countries they are preparing to visit;

they must be aware of the health and security risks inherent in any travel outside their usual environment and behave in such a way as to minimize those risks;

[Article 2] Tourism as a vehicle for individual and collective fulfilment

1. Tourism, the activity most frequently associated with rest and relaxation, sport and access to culture and nature, should be planned and practised as a privileged means of individual and collective fulfilment; when practised with a sufficiently open mind, it is an irreplaceable factor of self-education, mutual tolerance and for learning about the legitimate differences between peoples and cultures and their diversity;

2. Tourism activities should respect the equality of men and women; they should promote human rights and, more particularly, the individual rights of the most vulnerable groups, notably children, the elderly, the handicapped, ethnic minorities and indigenous peoples;

3. The exploitation of human beings in any form, particularly sexual, especially when applied to children, conflicts with the fundamental aims of tourism and is the negation of tourism; as such, in accordance with international law, it should be energetically combatted with the cooperation of all the States concerned and penalized without concession by the national legislation of both the countries visited and the countries of the perpetrators of these acts, even when they are carried out abroad;

4. Travel for purposes of religion, health, education and cultural or linguistic exchanges are particularly beneficial forms of tourism, which deserve encouragement;

5. The introduction into curricula of education about the value of tourist exchanges, their economic, social and cultural benefits, and also their risks, should be encouraged;

[Article 3] Tourism, a factor of sustainable development

1. All the stakeholders in tourism development should safeguard the natural environment with a view to achieving sound, continuous and sustainable economic growth geared to satisfying equitably the needs and aspirations of present and future generations;

2. All forms of tourism development that are conducive to saving rare and precious resources, in particular water and energy, as well as avoiding so far as possible

waste production, should be given priority and encouraged by national, regional and local public authorities;

3.The staggering in time and space of tourist and visitor flows, particularly those resulting from paid leave and school holidays, and a more even distribution of holidays should be sought so as to reduce the pressure of tourism activity on the environment and enhance its beneficial impact on the tourism industry and the local economy;

4.Tourism infrastructure should be designed and tourism activities programmed in such a way as to protect the natural heritage composed of ecosystems and biodiversity and to preserve endangered species of wildlife; the stakeholders in tourism development, and especially professionals, should agree to the imposition of limitations or constraints on their activities when these are exercised in particularly sensitive areas: desert, polar or high mountain regions, coastal areas, tropical forests or wetlands, propitious to the creation of nature reserves or protected areas;

5.Nature tourism and ecotourism are recognized as being particularly conducive to enriching and enhancing the standing of tourism, provided they respect the natural heritage and local populations and are in keeping with the carrying capacity of the sites;

[Article 4] Tourism, a user of the cultural heritage of mankind and contributor to its enhancement

1.Tourism resources belong to the common heritage of mankind; the communities in whose territories they are situated have particular rights and obligations to them;

2.Tourism policies and activities should be conducted with respect for the artistic, archaeological and cultural heritage, which they should protect and pass on to future generations; particular care should be devoted to preserving and upgrading monuments, shrines and museums as well as archaeological and historic sites which must be widely open to tourist visits; encouragement should be given to public access to privately owned cultural property and monuments, with respect for the rights of their owners, as well as to religious buildings, without prejudice to normal needs of worship;

3.Financial resources derived from visits to cultural sites and monuments should, at least in part, be used for the upkeep, safeguard, development and embellishment of this heritage;

4. Tourism activity should be planned in such a way as to allow traditional cultural products, crafts and folklore to survive and flourish, rather than causing them to degenerate and become standardized;

[Article 5] Tourism, a beneficial activity for host countries and communities

1. Local populations should be associated with tourism activities and share equitably in the economic, social and cultural benefits they generate, and particularly in the creation of direct and indirect jobs resulting from them;

2. Tourism policies should be applied in such a way as to help to raise the standard of living of the populations of the regions visited and meet their needs; the planning and architectural approach to and operation of tourism resorts and accommodation should aim to integrate them, to the extent possible, in the local economic and social fabric; where skills are equal, priority should be given to local manpower;

3. Special attention should be paid to the specific problems of coastal areas and island territories and to vulnerable rural or mountain regions, for which tourism often represents a rare opportunity for development in the face of the decline of traditional economic activities;

4. Tourism professionals, particularly investors, governed by the regulations laid down by the public authorities, should carry out studies of the impact of their development projects on the environment and natural surroundings; they should also deliver, with the greatest transparency and objectivity, information on their future programmes and their foreseeable repercussions and foster dialogue on their contents with the populations concerned;

[Article 6] Obligations of stakeholders in tourism development

1. Tourism professionals have an obligation to provide tourists with objective and honest information on their places of destination and on the conditions of travel, hospitality and stays; they should ensure that the contractual clauses proposed to their customers are readily understandable as to the nature, price and quality of the services they commit themselves to providing and the financial compensation payable by them in the event of a unilateral breach of contract on their part;

2. Tourism professionals, insofar as it depends on them, should show concern, in cooperation with the public authorities, for the security and safety, accident prevention, health protection and food safety of those who seek their services; likewise, they should ensure the existence of suitable systems of insurance and assistance; they should accept the reporting obligations prescribed by national regulations and pay fair compensation in the event of failure to observe their contractual obligations

3. Tourism professionals, so far as this depends on them, should contribute to the cultural and spiritual fulfilment of tourists and allow them, during their travels, to practise their religions;

4. The public authorities of the generating States and the host countries, in cooperation with the professionals concerned and their associations, should ensure that the necessary mechanisms are in place for the repatriation of tourists in the event of the bankruptcy of the enterprise that organized their travel;

5. Governments have the right – and the duty - especially in a crisis, to inform their nationals of the difficult circumstances, or even the dangers they may encounter during their travels abroad; it is their responsibility however to issue such information without prejudicing in an unjustified or exaggerated manner the tourism industry of the host countries and the interests of their own operators; the contents of travel advisories should therefore be discussed beforehand with the authorities of the host countries and the professionals concerned; recommendations formulated should be strictly proportionate to the gravity of the situations encountered and confined to the geographical areas where the insecurity has arisen; such advisories should be qualified or cancelled as soon as a return to normality permits;

6. The press, and particularly the specialized travel press and the other media, including modern means of electronic communication, should issue honest and balanced information on events and situations that could influence the flow of tourists; they should also provide accurate and reliable information to the consumers of tourism services; the new communication and electronic commerce technologies should also be developed and used for this purpose; as is the case for the media, they should not in any way promote sex tourism;

[Article 7] Right to tourism

1. The prospect of direct and personal access to the discovery and enjoyment of the planet's resources constitutes a right equally open to all the world's inhabitants; the increasingly extensive participation in national and international tourism should be regarded as one of the best possible expressions of the sustained growth of free time, and obstacles should not be placed in its way;

2. The universal right to tourism must be regarded as the corollary of the right to rest and leisure, including reasonable limitation of working hours and periodic holidays with pay, guaranteed by Article 24 of the Universal Declaration of Human Rights and Article 7.d of the International Covenant on Economic, Social and Cultural Rights;

3. Social tourism, and in particular associative tourism, which facilitates widespread access to leisure, travel and holidays, should be developed with the support of the public authorities;

4. Family, youth, student and senior tourism and tourism for people with disabilities, should be encouraged and facilitated;

[Article 8] Liberty of tourist movements

1. Tourists and visitors should benefit, in compliance with international law and national legislation, from the liberty to move within their countries and from one State to another, in accordance with Article 13 of the Universal Declaration of Human Rights; they should have access to places of transit and stay and to tourism and cultural sites without being subject to excessive formalities or discrimination;

2. Tourists and visitors should have access to all available forms of communication, internal or external; they should benefit from prompt and easy access to local administrative, legal and health services; they should be free to contact the consular representatives of their countries of origin in compliance with the diplomatic conventions in force;

3. Tourists and visitors should benefit from the same rights as the citizens of the country visited concerning the confidentiality of the personal data and information concerning them, especially when these are stored electronically;

4. Administrative procedures relating to border crossings whether they fall within the competence of States or result from international agreements, such as visas or health and customs formalities, should be adapted, so far as possible, so as to facilitate to

the maximum freedom of travel and widespread access to international tourism; agreements between groups of countries to harmonize and simplify these procedures should be encouraged; specific taxes and levies penalizing the tourism industry and undermining its competitiveness should be gradually phased out or corrected;

5. So far as the economic situation of the countries from which they come permits, travellers should have access to allowances of convertible currencies needed for their travels;

[Article 9] Rights of the workers and entrepreneurs in the tourism industry

1. The fundamental rights of salaried and self-employed workers in the tourism industry and related activities, should be guaranteed under the supervision of the national and local administrations, both of their States of origin and of the host countries with particular care, given the specific constraints linked in particular to the seasonality of their activity, the global dimension of their industry and the flexibility often required of them by the nature of their work;

2. Salaried and self-employed workers in the tourism industry and related activities have the right and the duty to acquire appropriate initial and continuous training; they should be given adequate social protection; job insecurity should be limited so far as possible; and a specific status, with particular regard to their social welfare, should be offered to seasonal workers in the sector;

3. Any natural or legal person, provided he, she or it has the necessary abilities and skills, should be entitled to develop a professional activity in the field of tourism under existing national laws; entrepreneurs and investors - especially in the area of small and medium-sized enterprises – should be entitled to free access to the tourism sector with a minimum of legal or administrative restrictions;

4. Exchanges of experience offered to executives and workers, whether salaried or not, from different countries, contributes to foster the development of the world tourism industry; these movements should be facilitated so far as possible in compliance with the applicable national laws and international conventions;

5. As an irreplaceable factor of solidarity in the development and dynamic growth of international exchanges, multinational enterprises of the tourism industry should not exploit the dominant positions they sometimes occupy; they should avoid becoming the vehicles of cultural and social models artificially imposed on the host

communities; in exchange for their freedom to invest and trade which should be fully recognized, they should involve themselves in local development, avoiding, by the excessive repatriation of their profits or their induced imports, a reduction of their contribution to the economies in which they are established;

6. Partnership and the establishment of balanced relations between enterprises of generating and receiving countries contribute to the sustainable development of tourism and an equitable distribution of the benefits of its growth;

[Article 10] Implementation of the principles of the Global Code of Ethics for Tourism

1. The public and private stakeholders in tourism development should cooperate in the implementation of these principles and monitor their effective application;

2. The stakeholders in tourism development should recognize the role of international institutions, among which the World Tourism Organization ranks first, and nongovernmental organizations with competence in the field of tourism promotion and development, the protection of human rights, the environment or health, with due respect for the general principles of international law;

3. The same stakeholders should demonstrate their intention to refer any disputes concerning the application or interpretation of the Global Code of Ethics for Tourism for conciliation to an impartial third body known as the World Committee on Tourism Ethics.

SUSTAINABLE TOURISM STEWARDSHIP COUNCIL (STSC)

The Sustainable Tourism Stewardship Council is a proposed global accreditation body for sustainable tourism and ecotourism certifiers. If this body is found feasible, it will set international standards for certification of tourism industry organisations that want to claim being sustainable or practicing ecotourism. The current project (August 2001- November 2002) investigates the viability of such body by consulting a wide range of stakeholders.

The Rainforest Alliance is co-ordinating this proposal with initial funding from the Ford Foundation. The proposal is supported by a multidisciplinary coalition in the form of an advisory board that includes key certification and accreditation experts from WTO/OMT, WWF, The International Ecotourism Society, Ecotrans, Caribbean Alliance for Sustainable Tourism, Conservation International, as well as representatives from a wide range of non-governmental organizations, tourism certifiers and several internationally recognized sustainable tourism and ecotourism expert consultants. The consultants working on the feasibility proposal have developed a database of over 1,000 key organizations and individuals that are directly involved in the development of standards, will be impacted by the development of international standards in tourism, or have shown interest in participating in the proposals. Two rounds of consultation have been devised, a first one exploring the parameters under which the different organizations would consider accreditation acceptable. This has taken place through both on-line discussions, the completion of questionnaires, and the participation in international workshops. The workshops conducted to date have used international events gathering tourism experts to minimize the cost of meetings and allow broader participation. The STSC team has conducted consultation workshops and discussions at events in Brazil, Australia, United Kingdom, Belize, Germany, USA, India, Peru, Thailand and Kenya.

The first draft for the feasibility of the Sustainable Tourism Stewardship Council will be distributed in May 2002, at which stage an extensive process of consultation amongst stakeholders will take place. The current work of the consultants covers the following aspects:

1. Market Demand

Generally demand will not be generated by consumers; these do not prioritise environmental, and even less social issues in their purchasing patterns, and neither certification bodies nor a possible accreditation body will have the promotional budget to make a difference. Demand will have to be created via supply chain management and financial methods. Tour operators play a key role in supply chain management that has not been exploited in certification, and could be the most effective target market. Methods to use financial mechanisms to create demand range from promoting ethical investment funds to shareholder pressure for accreditation.

The ethics of accreditation will have to be considered; many small companies will not have the economies of scale to consider certification due to cost; if accreditation increases the need to be certified, this has to be done with capacity building and other incentives, which are perceived as a responsibility of governments. Businesses will need to see how eco-savings, increased business or added value can offset extra costs. It will be easier to convince large companies than small ones, and the latter are likely to only be able to enter through the certification of whole chains of supply.

2. Organization and implementation

A major consideration given these ethical issues will be how such an organisation may be structured to ensure it is a tight, cost effective one. A set of scenarios will be presented, including different financial models, along with recommendations on operating procedures and international accreditation standards. Consultation has revealed there are diverse criteria used to certify tourism operations, and that criteria often consider key regional issues, there is a need to ensure regional issues can be catered for on the broader level within the STSC. There is considerable inconsistency regarding first, second or third party verification. The consultation to date has revealed that third party verification is necessary for transparency.

3. Financial Sustainability

One of the major problems with tourism certification programmes to date has been the fact they have often been established with the assistance of grant money. Participation/membership fees have, on the whole, been low and often subsidised by the certification body themselves in a bid to increase the number of businesses involved. This is not a financially viable solution as once grant money dries up, there is a serious

lack of resources to continue service provision. Thus it is vital that the organisational structure of the STSC does not represent a financial burden.

In order to make sure that a future global accreditation body is built on a financially solid foundation a financial feasibility study is being conducted. The study will lead to the preparation of a financial feasibility plan that will include: funding sources, pricing strategies, start-up and operating costs. The financial sustainability plan will also be considering sources of revenue and expenditure. Revenues are generated through membership fees, funding from international agencies, in kind provision of secretariat by international organization, financial support from private foundations, funding from the national environmental agencies in the countries where the tourists originate from, provisions from the national tourism boards in the tourism countries, grants, verification and capacity building. Expenditures will mainly come from general running costs, costs related to control visits by verifiers, costs from documenting the benefits of sustainable tourism and marketing.

VOLUNTARY INITIATIVES FOR SUSTAINABILITY IN TOURISM (VISIT)

VISIT (Voluntary Initiatives for Sustainability in Tourism) is a European Commissionfunded project that aims to provide a networking platform for European tourism ecolabels to collaborate. The joint project VISIT shall demonstrate how ecolabels can be an effective instrument in moving the European tourism industry and consumers towards sustainability. To reach its goal VISIT has four interrelated objectives:

1. to demonstrate how broadly accepted *environmental indicators* and benchmarks for ecolabels (accommodation and destinations) can contribute to an assessment of environmental effects of various ecolabels and other instruments.

2. to demonstrate how a *partnership of ecolabels* can be achieved, lead to *common standards* and contribute to increased transparency, quality and joint promotion.

3. to demonstrate how labelled enterprises (specially SMEs) and products can be integrated into European tourism offers by *information and matching* activities towards the tourism industry.

4. to demonstrate how consumers awareness and demand for environmentally friendly tourism can be increased by implementation of a European *image campaign* during the “International Year of Ecotourism 2002” and 2003.

VISIT is a bottom-up proposal from 10 certification schemes aiming to work together and internationalise their standards and procedures. The ten schemes working within VISIT are Blue Flag, Green Globe 21, Green Tourism Business Scheme (Scotland), Green Key (Denmark), Legambiente (Italy), Green Keys (France), Luxembourg, Milieubarometer (Holland), Nordic Swan (Scandinavia) and the Austrian national label.

VISIT is developing (Spring-Summer 2002) a “political committee” that will take the role of an accreditation panel by checking the performance of each certification body against the accreditation criteria.

VISIT does not pretend to say that certified products are sustainable, since to do so it would be necessary to agree on an absolute figure of sustainability, but what can be done is prove that consumption data on key criteria is lower for certified products, so these are better performing. The majority of the ten labels under VISIT focus only on

environmental criteria, and acknowledge the need to include other sustainability criteria.

A first draft of the VISIT Standard, translated from the original in German by the consultants, of the 10 pluses for 10 pluses for a high quality of the environment. VISIT particularly recommends the Ecolabels, which contribute to a considerable degree to

1. Nature and landscape to be particularly preserved
2. Give preference to the supply and purchase regional and environmentally friendly products and food
3. Reduction of consumption of energy and drinking water and use of renewable energy sources
4. Waste water to be disposed correctly and waste reduced and reused
5. Preference to the public and environmental careful means of transport VISIT Ecolabels to achieve this through:
 6. Environmental management in the operations, including staff training and the environmental information for the guests.
 7. Clear minimum requirements in everyone of these environmental areas beyond legal compliance
 8. Strict verification of the tourism mechanisms, which apply for the Ecolabel, locally and by independent and trained specialists
 9. Delimitation of the validity of the Ecolabels on max. of three years and a regular examination and updating of the criteria in arrangement with tourism -, environmental and consumer federations
 10. Regular check of environmental consumption with the certified tourism suppliers, in order to measure the positive environmental effects in numbers.

Certification Systems for Sustainable Tourism and Ecotourism

Below are descriptions of the functioning certification programs that were represented at the Ecotourism and Sustainable Tourism Certification Workshop, held at the Mohonk Mountain House in November 2000. Information comes from participants, websites and literature, and is current as of spring 2001.

International Programs

1. Green Globe 21

Scope of Program: Mass Tourism & Sustainable Tourism

Geographic scope: Worldwide

Sectors covered: Airlines, airports, caravan parks, car hire, convention center, cruise boat, exhibition halls, golf courses, hotels, marinas, railways, restaurants, vineyards, and destinations including communities and protected areas

Date(s) of initiation: Developed in 1993. Officially launched in 1994 as a membership program with no standards or auditing. Companies received logo as soon as they became Green Globe member. Upgraded in 1999 with a standard and independent auditing. Upgraded again in April 2001 to include three tiers—Affiliate, Benchmarked, and certified—with independent third party auditing for certification. The logo is not received unless an operation is above the measured Benchmarking baseline level of performance.

Institution(s): Green Globe 21 is a for-profit company comprised of three joint venture partners: Green Globe (London) which is responsible for global marketing; Green Globe

Asia Pacific (Canberra) which is based at the Australian Cooperative Research Center (CRC) for Sustainable Tourism and responsible for development of the Green Globe product; and Green Globe America (Puerto Rico) which has been taken on by the Caribbean Action for Sustainable Tourism (CAST) and is responsible for the Caribbean and South America. Green Globe also lists as its “strategic partners” industry and government organizations, including PATA, WTTC, WTO, and UNEP, and 14 universities linked to the Australian CRC. It provides the environmental certification program for PATA.



Funding source(s): Green Globe was originally a subsidiary of WTTC. In late 1999, in a “friendly buy out,” WTTC transferred Green Globe to a group of WTTC investors. Funding for the scheme comes from businesses that seek Green Globe Benchmarking and Certification services and products.

Criteria: Primarily process-based, using ISO 14001 management system. In May 2001, Green Globe introduced new Benchmarking and Certification levels. Benchmarking measures the actual environmental performance of companies for 9 key environmental and social performance areas which include some performance criteria. Operations are entitled to use the Green Globe logo (without check) if they are Benchmarked above baseline for all criteria. The Green Globe brand (with check) is achieved if an operation meets the requirements of the Green Globe Standard, has been independently assessed, and has been Benchmarked with all criteria above baseline. Green Globe is placing particular emphasis on reducing the emission of greenhouse gases as part of its benchmarking process. The Benchmarking report returned by Green Globe to applicants provides an actual Benchmarked “reporting index” and recommendations for improvement in environmental performance.

Auditing: By 2001, independent third party auditing (assessment) was required. Assessors must be trained and have passed an exam prior to receiving their Green Globe Assessor qualification. The assessment is based on verification of the supplied Benchmarking data and the achievement of the Green Globe Standard by operators. Assessment is undertaken annually. Three global companies have been accredited as Accredited Green Globe Certification Organizations including Societe Generale de Surveillance (SGS), Anglo Japanese American Registrars, and BM Trada.

Awarding of Certification: Certification of operations is undertaken globally by both Green Globe and by accredited Green Globe certification organizations. Certification recommendations are evaluated and signed off by Green Globe. Benchmarking is a compulsory part of certification: the originally supplied Benchmarking data must be verified by assessors during the certification process and the analysis of the raw data supplied by operations is undertaken by Green Globe. All 9 key performance areas must be above a baseline level of performance for an operation to be successfully certified.

Fees: International Green Globe Affiliate fees, the introductory stage for Green Globe are US\$50. International registration fees for Benchmarking and Certification is the same as the annual fee and range from \$200 to \$1,000, depending on the size of the company. Annual fees for Green Globe Communities either Benchmarking or Certifying are \$5,000. Assessment fees are in addition to these fees. National fee rates also apply, and are often less than the international fee.

One level or multiple levels:Two: Benchmarking and Certification.

Logo(s): Benchmarked companies use the logo without the check and can qualify for Green Globe annual awards. A Certified operation uses the logo with the check. Logos are dated, and current for that year only.

Certified Companies/Products: Between November 1998 and August 2000, 30 companies, mainly hotels, were certified, according to the website. However, Green Globe has been reorganized a number of times, and many businesses that joined the now-disbanded Green Globe membership program still use the logo. In April 2000, the EcoNETT Internet site advertised more than 500 businesses and destinations bearing the Green Globe logo.

In June 2001, one month after the launch of the upgraded Green Globe product, registrations globally totaled 885 participants including Affiliates, Benchmarking, Certifying and Green Globe companies. The great majority were Affiliates. By August, the first to be certified under this new program were 13 Caribbean hotels (in Aruba, Jamaica and Barbados), and another 27 were awaiting certification.

Marketing and Promotion: In 2000, Green Globe acknowledged the criticism (Synergy, 2000) that it lacked sufficient marketing or a marketing budget. In 2001, marketing and sales kits were upgraded and marketing through participating organizations, the web, and promotional campaign got underway. Major marketing campaigns are being conducted within the Asia Pacific.

Website: www.greenglobe21.com or www.greenglobe.org

National Programs

2. Australia: Nature and Ecotourism Accreditation Program (NEAP) and EcoGuide Program

Scope of Program: Eotourism and Sustainable Tourism

Geographic scope: Australia. As of mid-2001, developing a Fiji NEAP in conjunction with the Fiji Ecotourism Society.

Sectors covered: NEAP certifies products, not companies: accommodations, tours and attractions. EcoGuide program certifies guides

Date of initiation: 1993, idea and planning began; 1997, first products certified. The program demand continual improvement; so in 2000 there was an upgrade of criteria to NEAP II, and further upgrade will occur in 2004. EcoGuide program launched in 2001.



Institution(s): Originally, Ecotourism Association of Australia (EAA) and the Australian Tourism Operators Network (ATON). In May 2001, ATON relinquished ownership of the NEAP as accreditation was no longer part of their core business. EAA is now sole owner of NEAP.

Funding source(s): Government: Federal Office of National Tourism (ONT) granted US\$30,000 as a one-time seed grant to help develop NEAP criteria/program. Considerable in-kind support, cash donations and professional time were provided by the EAA and ATON estimated to be in the value of US\$400,000. Federal Government (Regional Tourism grants) provided \$95,000 to fund development of the EcoGuide Program.

Criteria: Mixture of process- and performance-based criteria. Performance-based, yes/no, and descriptive questions in the following areas:

- natural area focus
- interpretation
- environmental sustainability
- contribution to conservation
- working with local communities
- cultural component
- customer satisfaction
- responsible marketing.

For Nature Tourism products, core criteria must be met for natural area focus, environmental sustainability, customer satisfaction and responsible marketing, and if interpretation is provided it must be accurate. Ecotourism products must meet core criteria in *all* 8 principles. To gain Advanced Ecotourism status products must score bonus criteria and provide examples of innovations in best practice. The sister EcoGuides program that nests under NEAP demands that guides display competence in a number of key areas including minimal impact techniques, cultural sensitivity, group management, specialized ecological/environmental/cultural knowledge and advanced interpretive techniques.

Auditing: NEAP requires annual desk audits of specific criteria as well as random and complaint-based physical audits. The aim is to conduct one physical audit of every product during the three year accreditation period. Audits are currently conducted by auditors drawn from the pool of expertise provided by NEAP, the NEAP Panel, and assessors (EAA and independent industry experts). In mid-2001, NEAP began restructuring to provide a body of auditors independent of the NEAP management team, with an independent chair. This body will have responsibility for the formal training of

auditors, audit protocols and auditing schedules. The EcoGuide program has workplace assessors that assess guides on-site or in simulated workplaces and collects evidence of competence through direct and indirect evidence.

Awarding of Certification: NEAP: Five-member NEAP Panel (EAA, independent experts and an independent chair, currently from the University of Queensland), based on a desk audit of application document, marketing materials and two referee checks. Customer and stakeholder feedback may also be solicited. EcoGuide Program: Six member EcoGuide Panel consisting of EAA, representatives from Protected Area agencies, guiding associations and training organizations.

Fees: NEAP: Application fee of US\$85 (\$160 Australia) and US\$258 (\$485 Australia), depending on the annual business turnover, and an annual fee ranging between US\$53 (\$100 Australia) and US\$398 (\$750 Australia). Ecoguides: Application fee based on costrecovery of workplace assessment US\$55-265 (\$100-500 Australia) and an annual fee of US\$55 (\$100 Australia). One level or multiple levels: NEAP: Two categories—Nature Tourism and Ecotourism—with two levels of Ecotourism—Basic and Advanced Ecotourism. EcoGuide has one level.

Logo(s): Nature Tourism logo says Nature Tourism and has one check mark. Ecotourism logo says Ecotourism and has two check marks. Advanced Ecotourism logo says Advanced Ecotourism and has three check marks. EcoGuide logos has one check mark and says Guide. All are good for three years.

Certified Companies/Products: Over 320 NEAP accredited accommodations, tours, and attractions throughout Australia, currently half based in Queensland. Fifty EcoGuides were certified in the first six months after the program was launched in January 2001.

Marketing and Promotion: Tourism promotion guides, such as the Automobile Association and the Queensland Tourism Board, provide special listings and recognition of NEAP certified products. Australian government has produced an in-flight video on NEAP for Qantas Airlines and has financed several short commercials about NEAP. A NEAP website was initiated in the second half of 2000. Plans include developing a scheme to give preferential treatment to NEAP products, where only NEAP-certified products would be allowed in a protected area or specific protected zones.

Website: www.ecotourism.org.au/ and follow NEAP or EcoGuide logos

3. Costa Rica: Certification for Sustainable Tourism (CST)

Scope of Program: Billed as Sustainable Tourism, but really covers all three types: Mass Tourism, Sustainable Tourism, and Ecotourism

Geographic scope: Costa Rica. CST is being considered as model for other national and regional programs. In June 2001, six Central American countries concluded an agreement to promote a single regional “Certificate of Sustainable Tourism,” based on CST.

Sectors covered: Accommodations (hotels and lodges). Instrument for tour operators

is in the field trial stage. Future plans include restaurants, transportation and other sectors of the tourism industry. ICT (Costa Rican Tourism Institute) also works closely with Blue Flag to certify beaches in Costa Rica.

Date of initiation: Planning began in 1996. Certification began in 1998.

Institution(s): Costa Rican Tourism Institute (ICT), with INCAE, a business school connected with Harvard University. The Accreditation Board is the owner of intellectual property rights and supervises certification and modifications. The Board has membership from ICT, INCAE, universities, environmental and scientific NGOs, and the Chamber of Tourism (CANATUR).

Funding source(s): Government (via ICT). Future goal to become self-supporting.

Criteria: Primarily performance-based but also has ISO-like environmental management system criteria for assessing the physical plant. The questionnaire consists of a checklist of 153 criteria in four general categories:

- Physical-biological environment (including such subcategories as emissions and waste, landscaping);
- Hotel facilities and infrastructure (including, for instance, management policies, final disposal, and training);
- Customers (including “respect for community and nature”); and,
- Social-economic environment (including direct and indirect economic benefits, contributions to cultural development and health).

Auditing: Initial site visit by ICT staff to explain CST program. Next a formal assessment based on the criteria and recommendations are made. Once implementation is confirmed, a written evaluation is sent to the National Accreditation Commission.



An online self-evaluation allows hotels to assess where improvements are needed, and the inspection team's survey results are posted on the web. Surveillance audits are supposed to be repeated every six months to a year, but there is a large backlog of hotels waiting to be audited. The plan is to switch to independent, third party auditors in the near future in order to eliminate conflicts of interest.

Awarding of Certification: National Accreditation Commission, a voluntary committee headed by Minister of Tourism and composed of representatives from government, NGOs, scientific organizations, tourism industry, and universities. Reviews all applicants and awards eco-awards.

Fees: First round has been free, financed by ICT, in order to attract broad participation.

In the future, companies will be charged, both a flat fee and an additional amount, based on size, but exact amounts are not yet determined.

One level or multiple levels: Five levels.

Logo(s): Plaque with one to five leaves.

Certified Companies/Products: By mid-2001 there were 51 certified hotels. None have yet received the top five rating (perfect score) although one hotel is close; only three received level four. About 10 percent of applicants have failed, getting a zero rating. By mid-2000, 171 of the estimated 400 hotels in Costa Rica suitable for certification had signed up and were waiting to be audited.

Marketing and Promotion: Main promotional tool is CST website, which is financed by USAID. CST is promoted as part of government's general international tourism marketing. Most accommodations have their own websites where they post their CST ecolabel. However, CST officials say marketing remains a "huge problem."

Website: www.turismo-sostenible.co.cr or www.sustainable-tourism.co.cr

4. New Zealand: Qualmark Accreditation Program

Scope of Program: Mass Tourism. Expansion will cover Ecotourism and Sustainable Tourism.

Geographic scope: New Zealand

Sectors covered: Currently rates and certifies accommodations for quality, service, and cost. It assigns star grades (one to five) in four generic areas (hotels, holiday parks, backpackers, self-contained and serviced facilities) as well as to retail tourist shops. Expansion plans include environmental and cultural criteria and will



cover adventure tourism operators, transport, attractions, tours, retail shops, charter boats, scenic flights, rental cars, and range of ecotourism facilities and activities.

Date of initiation: 1993, idea and planning begun. 1994 began certifying accommodations for quality. 2000, drafted proposed expansion to set of minimum standards for responsible tourism. 2002, products to be certified under this new criteria.

Institution(s): Begun by two non-profits, Adventure Tourism Council NZ (ATC) and

Tourism Industry Association NZ (TIA). Qualmark NZ is a joint venture between the private sector (the Automobile Association) and New Zealand governments' national tourism organization (Tourism New Zealand). Qualmark's role in expansion is as program manager and certification body.

Funding source(s): Currently, accommodation ratings funded by TIA and ATC. Development of standards funded by industry members. Seeking funding from government and private sector for expansion.

Criteria: Accommodations and tourist shops evaluated based on list of facilities, quality, service, cost. New ecotourism and sustainable tourism will be performance-based with both generic and sector specific criteria, including:

- natural area focus
- interpretation
- safety/legislation
- environmental sustainability
- contribution to conservation
- working with local communities
- cultural component
- customer satisfaction
- responsible marketing

By 2002, Qualmark plans to be compatible with Green Globe 21.

Auditing: Accommodations and retail shops are assessed annually by trained, independent auditors. New program will include annual desk audits of specific criteria and annual site visit administered by Qualmark.

Awarding of Certification: By Qualmark, based on audit processes.

Fees: Currently one year license fee is NZ\$440 (US\$1,100) to NZ\$1,500 (US\$3750) annually for accommodations. Proposed annual fee ranging between NZ\$500 and NZ\$800.

One level or multiple levels: Currently five star rating. New program initially plans one level. Variations may develop.

Logo(s): Qualmark accredited company brand. Good for one year. Beginning in 2001, TIA is offering its members option for Green Globe 21 brand. Qualmark plans to pick up

Green Globe in 2002 for all its certified products.

Certified Companies/Products: Current certification includes ratings for 44 hotels, 52 backpacker facilities, and several hundred motels. Implementation of sustainable tourism and ecotourism certification planned for late 2001.

Marketing and Promotion: Website and tourism promotion guides, such as those published by Automobile Association and Tourism New Zealand. Distribution of brochures by Visitor Information Networks. A core component of membership is to provide special listings and recognition of Qualmark certified products. Considering developing a scheme to give preferential treatment to Qualmark certified products, where Qualmark products would be allowed some added bonus when working in protected areas.

Website: www.tianz.org.nz or www.qualmark.co.nz

Regional Programs

5. The Petén, Guatemala: Green Deal

Scope of Program: Ecotourism and Sustainable Tourism

Geographic scope: The lowland Petén region of Guatemala
Sectors covered: Will cover accommodations, tour operators, restaurants, tourist transport, guides, and communities

Date of initiation: 1999

Institution(s): Asociación Alianza Verde (AV), local non-profit NGO, as the implementer and Conservation International (CI), international non-profit NGO, providing technical and financial assistance.

Funding source(s): Conservation International and PROARCA/CAPAS program of USAID.

Criteria: Two types: 1) Generic standards—process-based environmental management system standards, many of which parallel ISO requirements, are required for all businesses; 2) Specific performance-based criteria for each sector that cover quality control, environmental and socio-cultural issues.

Auditing: Independent six-member audit team selected for reputations of honesty, objectivity and familiarity with local tourism operations and including specialists in



quality control, environment and/or socio-cultural issues and trained by CI and AV in auditing techniques and ethics.

Awarding of Certification: Certification Commission, currently composed of representatives from AV, Ministry of Environment and Natural Resources, Propetén/CI, and the University of San Carlos.

Fees: Not yet determined. AV is examining a possible fee structure, based upon size of operation. Will include annual fee, assessment fee, and direct auditing costs.

One level or multiple levels: Currently, one level. Considering using five levels for each of the three areas of interest: quality control, environment, socio-cultural issues.

Logo(s): Currently, one seal. Proposal to use 1-5 symbols to indicate levels attained in each of three areas of interest. Valid for one year.

Certified Companies/Products: 9 enterprises are in the process-3 ecolodges, 1 community-based lodge, the EcoEscuela (a Spanish language school and homestay program for foreigners), 2 tour operators, and 2 restaurants.

Marketing and Promotion: Through various publications (including *Destination Petén*, a local tourism guide) and Internet web pages. Alianza Verde will publish annual Green Deal directory of certified companies and community-based tourism activities.

Website: www.greendeal.org and part of the Alianza Verde's network at www.peten.net

6. Saskatchewan, Canada: Horizons: Saskatchewan Ecotourism Accreditation System

Scope of Program: Ecotourism and Sustainable Tourism

Geographic scope: Province of Saskatchewan, Canada

Sectors covered: Accommodations, tours, attractions

Date of initiation: 1999 program development; first products certified in 2000

Institution(s): Ecotourism Society of Saskatchewan (ESS), a non-profit NGO

Funding source(s): Application and certification fees and government funding

Criteria: Performance-based, using two forms completed by applicants and reviewed by program assessment team:

- 1) Application: yes/no and descriptive questions about the following:
 - Administration and business practices
 - Nature appreciation; authenticity and concurrence of affected cultures
 - Interpretation



- Community economic benefits
- Tangible return to conservation
- Impact monitoring and quality control
- Sustainable tourism issues
- Protected status of host area(s)
- Special/unique places and attractions
- Quality of interpretation
- Qualifications of staff
- Sustainable accommodation
- Activity-based transportation systems
- Food

2) Evaluation Report: descriptive information in the following areas:

- Site inventory and assessment—location, land uses, conservation status, future development plans, zoning and/or planning restrictions, staffing and packaging, accessibility of site, conformity with municipal requirements;
- Site inventories—birds, plants and landforms, non-bird wildlife;
- Natural history information—important wildlife areas; key plants, animals, habitats and landforms; natural processes (such as plant-animal interactions, water cycling, etc.), archaeological resources; human activities;
- Area sensitivity assessment—critical habitats; habitat sensitivity map;
- Visitor information plan—who uses the site; how many people; what are their skills and interests; why do they visit; how long will they be allowed to stay; how often do they return; age and gender.

Auditing: Before an application is submitted to ESS, an ESS representative pays a visit to the operator to assist him/her with the completion of the preliminary application form. After the completion of the confidential document, two ESS Board members will revisit the business to conduct an on-site audit.

Awarding of Certification: ESS Board of Directors.

Fees: Application fee of \$100 Canada (US\$65) fee, of which \$50 Canada (US\$33) is for ESS membership and another \$50 Canada for application process and site visit. Renewal requires \$50 Canada for annual site visit.

One level or multiple levels: One level.

Logo(s): Certificate. Valid for one year.

Certified companies/products: By mid-2001, 3 resorts, a historical canoe tour, and a dog-sled tour excursion had been certified.

Marketing and Promotion: Via the Internet, a newsletter (three times a year), and

Tourism Saskatchewan's publications.

Website: www.ecotourism.sk.ca

Other Sectors

7. *Blue Flag Campaign*

Scope of Program: Sustainable Tourism

Geographic scope: Currently, 21 European countries.

Expanding to Costa Rica and other parts of Latin America, the Caribbean, Southeast Asia, and South Africa

Sectors covered: Beaches and marinas, with local governments and marina owners as the applicants

Date of initiation: 1987

Institution(s): Owned and managed by the Foundation for Environmental Education (FEE), a non-profit NGO with a coordinating office in Denmark. Individual non-profit NGOs implement programs within each country.

Funding source(s): Initially the European Commission; currently the individual NGOs in each country raise their own funds via a) fees to certified organizations or businesses, b) government grants, c) and/or business sponsorships. National implementers pay an annual fee to European FEE.

Criteria: Performance-based criteria: 27 specific criteria for beaches, 15 for marinas. Some are “imperative criteria” required in all countries and others are “guideline criteria” which are optional for national implementing organization. They cover four areas:

- water quality
- environmental management
- safety, services and facilities
- environmental education and information.

Auditing: Conducted by national Blue Flag implementers and national environmental protection agencies throughout the summer season.

Awarding of Certification: The European Blue Flag jury (3 FEE members, 1 from the European Union, 1 from UNEP, and 1 from European Union for Coastal Conservation) makes final decisions based on recommendations from national juries (representatives



from federal and local governments, NGOs, academics, and specialists in beach management).

Fees: Determined by each national implementer to cover assessment, site visits, logo, and promotional support to communities and marina owners.

One level or multiple levels: One level. All imperative criteria and a number of guideline criteria must be achieved in order to be awarded a Blue Flag.

Logo(s): Blue flag. Valid for one year only.

Certified companies/products: Over 2,500 beaches and marinas in 21 countries.

Marketing and promotion: Active promotional campaigns are conducted by European FEE, national Blue Flag organizations, and Blue Flag communities or marina owners; these include posters, articles in newspapers and magazines and leaflets. Tourist guides throughout Europe indicate which beaches are Blue Flag certified.

Website: www.blueflag.org

8. PAN (Protected Areas Network) Parks

Scope of Program: Ecotourism

Geographic scope: Protected areas in Europe

Sectors covered: Protected areas over 25,000 hectares, and communities and businesses engaged in tourism in/near protected areas

Date of initiation: Development began in 1997. Self-assessment of select protected areas conducted in early 2000. Criteria for first 3 of 5 principles completed in May 2001.

Auditing of at least 2 protected areas expected in 2002.

Institution(s): Program developed and supervised by the non-profit World Wide Fund for Nature (WWF) and the for-profit Dutch Leisure Company Molecaten Group. Executed by the non-profit PAN Parks Foundation, based in the Netherlands with a regional office in Hungary. Government participation mainly at the local level; input on creation of 5 principles.

Funding source(s): WWF and Molecaten Group, a for-profit tourism operator. Longterm goal is to become self-sufficient through commercial concepts and licensing. Criteria: Based on five principle areas:

- Natural heritage, legal protection, administration and ensuring that the natural value of the protected area is maintained.
- Habitat management, detailing elements of management plans and zoning to ensure that natural diversity and ecological processes are maintained.

- Visitor management.
- Regulations for sustainable tourism development and emphasizes sustainable use of economic, social and cultural resources of communities in the region of the protected area.
- Partners and sponsors—businesses, NGOs and parks authorities—to ensure that their visions and practices contribute to sustainable tourism and to the PAN Parks network.

Auditing: To be conducted by independent auditors.

Awarding of Certification: PAN Parks Foundation in agreement with PAN Parks Board (composed of representatives of WWF and the Molecaten Group) will accredit independent auditors who will conduct field verification of applicant protected areas. Based on the report of auditors, PAN Parks Foundation will award the certificate.

Fees: Not yet determined.

One level or multiple levels: One level.

Logo(s): Single design.

Certified companies/products: None yet; 7 national parks and one nature reserve are candidates.

Marketing and Promotion: Via the PAN Parks website, a quarterly newsletter (*PAN Parks Courier*), WWF publications and local and international media.

Website: www.panparks.org

9. *SmartVoyager*

Scope of Program: Ecotourism

Geographic scope: The Galapagos Islands, Ecuador

Sectors covered: Individual tour boats (“floating hotels”), not the associated companies.

Date of initiation: Officially launched in May 2000

Institution(s): Conservación y Desarrollo (C&D), an Ecuadorian non-profit NGO, and Rainforest Alliance (RA), an international non-profit NGO.

Funding source(s): General funds of C&D and RA.

Criteria: Combination of ISO 14001 standards and performance standards, based on 12 principles in these areas:

- company policy
- conservation of natural ecosystems
- reduction of negative environmental impacts



- lowering the risk of introduction and dispersal of exotic species
- fair treatment of workers
- employee training
- community relations and local welfare
- strict control of use, supply and storage of materials
- integrated waste management
- commitment on the part of the tourist
- safety
- planning and monitoring

Auditing: In preparation for certification, there is a pre-site audit conducted by a C&D representative to provide suggestions, followed by a complete site audit, also done by C&D team. Once certified, there will be annual audits by other C&D and RA representatives, as well as informal, unannounced audits.

Awarding of Certification: Certification Committee composed of at least one representative from C&D and one from RA, plus two or three international specialists.

Fees: Fees vary according to the size of the boat. First payment covers two years. Subsequent annual fees for boats with capacities above 16 passengers start at approximately US\$1,500. Fees are also charged for each site audit (an average of US\$160/day, plus travel expenses).

One level or multiple levels: One level. Requires compliance with at least 80% of the certification criteria, absence of “fatal flaws” and a written commitment for continual improvement in subsequent years.

Logo(s): A certificate and seal are provided.

Certified companies/products: Five vessels have been certified. Several other operators are enrolled and are working towards compliance.

Marketing and Promotion: Via the Internet, participation in special events, press releases and publications, letters to local operators, outbound operators and associations such as IGTOA (a network of outbound operators dedicated to conservation and sustainable tourism in the Galapagos).

Website: www.rainforest-alliance.org/programs/sv/

มาตรฐาน

สำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม (สมอ.) จัดทำหนังสือ "มาตรฐาน : ข้อมูลทั่วไป" ขึ้น เพื่อให้ความรู้ความเข้าใจแก่ทุกท่านในเรื่องของการมาตรฐาน ความหมาย ระดับ และหลักการ ของมาตรฐาน รวมถึงประโยชน์ที่ทุกฝ่ายจะได้รับนอกจากนี้ ท่านจะได้ทราบถึงการดำเนินงานด้านการมาตรฐานของประเทศไทย เครื่องหมายมาตรฐานสำหรับผลิตภัณฑ์อุตสาหกรรม (มอก.) ทั้งนี้ เพื่อให้ท่านได้รับสาระความรู้สั้นๆ ในเรื่องเกี่ยวกับมาตรฐานที่เกี่ยวข้อง ซึ่งจะช่วยให้เกิดความเข้าใจสามารถนำไปประยุกต์ใช้ให้เกิด ประโยชน์ต่อไป

- ความหมายของคำต่าง ๆ ที่เกี่ยวกับการมาตรฐาน
- ระดับมาตรฐาน
- หลักการของการมาตรฐาน
- ประโยชน์ของการมาตรฐาน
- ผลิตภัณฑ์ที่แสดงเครื่องหมายมาตรฐาน มีความหมายอย่างไร
- เครื่องหมายมาตรฐานสำหรับผลิตภัณฑ์

ความหมายของคำต่าง ๆ ที่เกี่ยวกับการมาตรฐาน

งานที่เกี่ยวกับ "การมาตรฐาน" มีศัพท์บัญญัติทางวิชาการที่เกี่ยวข้องอยู่มาก บางคำเป็นคำที่รู้จักแพร่หลาย และมีการนำไปใช้ในหลาย ๆ ด้าน อย่างไรก็ตามความหมายของศัพท์ที่เกี่ยวข้องกับมาตรฐานและการมาตรฐานนั้น ได้มีผู้ให้คำนิยามไว้หลายอย่างดังนี้

องค์การระหว่างประเทศว่าด้วยการมาตรฐาน (International Organization for Standardization-ISO) ได้ให้นิยามศัพท์การมาตรฐาน คือ

การมาตรฐาน (Standardization) หมายถึง กิจกรรมในการวางข้อกำหนดที่เกี่ยวข้องกับปัญหาสำคัญที่มีอยู่หรือที่จะเกิดขึ้น เพื่อให้เป็นหลักเกณฑ์ใช้กันทั่วไปจนเป็นปกติวิสัย โดยมุ่งให้บรรลุถึงความสำเร็จสูงสุดตามข้อกำหนดที่วางไว้

1. กล่าวโดยเฉพาะได้แก่ กิจกรรมที่ประกอบไปด้วยกระบวนการในการกำหนด การประกาศใช้ และการนำมาตรฐานต่าง ๆ ไปใช้

2. ประโยชน์ที่สำคัญของการมาตรฐาน ได้แก่ การปรับปรุงความเหมาะสมของ ผลิตภัณฑ์ กรรมวิธี และการบริการตามวัตถุประสงค์ที่ตั้งไว้ ป้องกันไม่ให้เกิดอุปสรรคในทางการค้า และส่งเสริมให้เกิดความร่วมมือกันทางเทคโนโลยี

มาตรฐาน (Standard) หมายถึง เอกสารที่จัดทำขึ้นจากการเห็นพ้องต้องกัน และได้รับความเห็นชอบจากองค์กรอันเป็นที่ยอมรับกันทั่วไป เอกสารดังกล่าววางกฎระเบียบแนวทางปฏิบัติหรือลักษณะเฉพาะแห่งกิจกรรม หรือผลที่เกิดขึ้นของกิจกรรมนั้น ๆ เพื่อให้เป็นหลักเกณฑ์ใช้กันทั่วไป จนเป็นปกติวิสัย โดยมุ่งให้บรรลุถึงความสำเร็จสูงสุดตามข้อกำหนดที่วางไว้

หมายเหตุ : มาตรฐานควรตั้งอยู่บนผลที่แน่นอนทางวิทยาศาสตร์ เทคโนโลยี และประสบการณ์ โดยมุ่งการส่งเสริมให้เกิดผลประโยชน์สูงสุดแก่ชุมชน

พจนานุกรมฉบับราชบัณฑิตยสถาน พ.ศ. 2525 ได้ให้คำนิยามของ มาตรฐาน ว่า มาตรฐาน คือ สิ่งที่ดีถือเป็นหลักสำหรับเทียบกำหนด

พระราชบัญญัติมาตรฐานผลิตภัณฑ์อุตสาหกรรม พ.ศ. 2511 ได้กำหนดคำว่า "มาตรฐาน" ไว้ว่า มาตรฐาน คือ ข้อกำหนดรายการอย่างใดอย่างหนึ่ง หรือหลายอย่างเกี่ยวกับ

1. จำพวก แบบ รูปร่าง มิติ การทำ เครื่องประกอบ คุณภาพ ชั้น ส่วนประกอบ ความสามารถ ความทนทานและความปลอดภัยของผลิตภัณฑ์อุตสาหกรรม
2. วิธีทำ วิธีออกแบบ วิธีเขียนรูป วิธีใช้ วัตถุที่จะนำมาทำผลิตภัณฑ์อุตสาหกรรม และความปลอดภัยอันเกี่ยวกับการทำผลิตภัณฑ์อุตสาหกรรม
3. จำพวก แบบ รูปร่าง มิติของหีบห่อ หรือสิ่งบรรจุชนิดอื่นรวมตลอดถึงการหีบห่อหรือสิ่งบรรจุชนิดอื่น วิธีการบรรจุ หีบห่อหรือผูกมัดและวัตถุที่ใช้ ในการนั้นด้วย
4. วิธีทดลอง วิธีวิเคราะห์ วิธีเปรียบเทียบ วิธีตรวจ วิธีทดสอบและวิธีชั่ง ตวง วัด อันเกี่ยวกับผลิตภัณฑ์อุตสาหกรรม
5. คำเฉพาะ คำย่อ สัญลักษณ์ เครื่องหมาย สี เลขหมาย และหน่วยที่ใช้ในทางวิชาการอันเกี่ยวกับผลิตภัณฑ์อุตสาหกรรม
6. ข้อกำหนดรายการอย่างอื่นอันเกี่ยวกับผลิตภัณฑ์อุตสาหกรรม ตามที่รัฐมนตรีประกาศ หรือตามพระราชกฤษฎีกา

มาตรฐานผลิตภัณฑ์อุตสาหกรรม

หมายถึง สิ่งหรือเกณฑ์ทางเทคนิคที่กำหนดขึ้น สำหรับผลิตภัณฑ์อุตสาหกรรม เกณฑ์ทางเทคนิคนี้จะระบุคุณลักษณะที่สำคัญของผลิตภัณฑ์ ประสิทธิภาพของการนำไปใช้งาน คุณภาพของวัตถุดิบที่นำมาผลิต ซึ่งจะรวมถึงวิธีการทดสอบด้วย เพื่อใช้เป็นเครื่องตัดสินว่าคุณภาพผลิตภัณฑ์นั้น ๆ เป็นไปตามมาตรฐานหรือไม่

มาตรฐานชุมชน

มาตรฐานชุมชนกำหนดขึ้น เพื่อสนับสนุนการนำภูมิปัญญาของแต่ละท้องถิ่นมาพัฒนา และยกระดับการผลิตให้มีคุณภาพเพื่อสร้างรายได้ให้ชุมชนอย่างยั่งยืน ตามโครงการ "หนึ่งตำบล หนึ่ง

ผลิตภัณฑ์" ซึ่งเป็นนโยบายของรัฐบาล โดยสำนักงานฯ ให้การรับรองและแสดงเครื่องหมายรับรองคุณภาพ เพื่อเพิ่มความน่าเชื่อถือแก่ผู้บริโภคและสามารถขยายตลาดส่งออกจำหน่ายใน ตลาดวงกว้างได้มากขึ้น

มาตรฐานสำหรับระบบการจัดการ

นอกจากมาตรฐานผลิตภัณฑ์แล้ว ยังมีมาตรฐานระบบการจัดการต่างๆ ซึ่งสามารถขอการรับรองได้ เมื่อหน่วยงานหรือองค์กรนั้นๆ มีการพัฒนาระบบคุณภาพเป็นไปตามข้อกำหนดของมาตรฐานแล้ว ก็สามารถขอการรับรองเพื่อเป็นการประกันความสามารถและคุณภาพที่เทียบเท่ามาตรฐานสากลได้

มาตรฐานระบบการจัดการ (Management System Standard)

คือ ข้อกำหนดหรือขั้นตอน ในการบริหาร กระบวนการทำงานต่างๆ ขององค์กร เพื่อให้เกิดการพัฒนาประสิทธิภาพและประสิทธิผลของการ ดำเนินงาน และบรรลุตามวัตถุประสงค์ที่วางไว้ ปัจจุบันมาตรฐานระบบการจัดการที่สำคัญและหน่วยงานทั่วโลกนำไปใช้อย่างแพร่หลาย ได้แก่ **มาตรฐานระบบการบริหารงานคุณภาพ ISO 9000**

ISO 9000 (Quality Management System : QMS) เป็นมาตรฐานสากลสำหรับการบริหารงานในองค์กรที่นำไปใช้กันอย่างแพร่หลาย เพื่อพัฒนาองค์กรให้มีกระบวนการทำงานที่มีประสิทธิภาพและมีคุณภาพ โดยสามารถนำไปใช้ได้ทุกองค์กร ทุกขนาดทั้งอุตสาหกรรมการผลิตและการบริการ เพื่อสร้างความพึงพอใจให้กับลูกค้าและผู้ที่เกี่ยวข้อง โดยปัจจุบัน ISO 9000 : 2000 แบ่งเนื้อหาออกเป็น 4 ฉบับ คือ

ISO 9000 :	ระบบการบริหารงานคุณภาพ – หลักการพื้นฐานและคำศัพท์
ISO 9001 :	ระบบการบริหารงานคุณภาพ – ข้อกำหนด
ISO 9004 :	ระบบการบริหารงานคุณภาพ - แนวทางการปรับปรุงสมรรถนะ
ISO 19011 :	แนวทางในการตรวจประเมินระบบการบริหารงานคุณภาพ และ/หรือระบบการจัดการสิ่งแวดล้อม

มาตรฐานระบบการจัดการสิ่งแวดล้อม ISO 14001

มาตรฐานระบบการจัดการสิ่งแวดล้อม (Environment Management System : EMS) เป็นมาตรฐานที่มีความสำคัญมากเพราะกำหนดขึ้นเพื่อสนับสนุนการรักษาสิ่งแวดล้อมของหน่วยงาน

หรือองค์กร ที่ครอบคลุมถึงการจัดระบบ โครงสร้างองค์กร การกำหนดความรับผิดชอบ การปฏิบัติงาน ระเบียบปฏิบัติ กระบวนการและการใช้ทรัพยากรที่เป็นมิตรกับสิ่งแวดล้อม เพื่อให้มีการจัดการและ สร้างจิตสำนึกที่ร่วมกันในการรักษาไว้ซึ่งสิ่งแวดล้อมที่ดีทั้งในหน่วยงานและรวมไปถึงชุมชนใกล้เคียง เพื่อนำไปสู่การพัฒนาอย่างยั่งยืนอีกด้วย

มาตรฐานระบบการจัดการอาชีวอนามัยและความปลอดภัย มอก. 18001

ระบบการจัดการอาชีวอนามัยและความปลอดภัย เป็นเรื่องที่มีความสำคัญต่อเราทุกคนเป็นอย่างมาก ทั้งนี้เพราะเป็นเรื่องที่เกี่ยวข้องกับเราโดยตรง หน่วยงานหรือองค์กรสมัยใหม่ในปัจจุบันจึงหันมาใส่ใจในเรื่องอาชีวอนามัยและความปลอดภัยของบุคลากรในกระบวนการทำงานต่างๆ กันมากขึ้น โดยการชี้บ่งอันตรายและประเมินความเสี่ยงที่อาจจะเกิดขึ้นทั้งภายในองค์กรเองและ ชุมชนใกล้เคียง ทั้งนี้เพื่อปรับปรุงและ พัฒนาการ ดำเนินงานในองค์กรอย่างต่อเนื่อง

มาตรฐานห้องปฏิบัติการสอบเทียบและห้องปฏิบัติการทดสอบ

การที่เราจะมั่นใจได้ว่าสินค้ามีคุณภาพหรือไม่นั้น จำเป็นที่จะต้องนำไปทดสอบจากหน่วยงาน ที่น่าเชื่อถือและมีเครื่องมือในการทดสอบที่มีคุณภาพและมีมาตรฐานเป็นที่ยอมรับ ซึ่งมาตรฐานที่นำมาใช้ในการกับหน่วยงานที่ให้บริการในเรื่องดังกล่าวได้แก่ มาตรฐานห้องปฏิบัติการสอบเทียบและห้องปฏิบัติการทดสอบตาม มอก.17025-2543 ซึ่งเป็นไปตามมาตรฐานสากล ISO/IEC 17025

มาตรฐานระบบการวิเคราะห์อันตรายและจุดวิกฤตที่ต้องควบคุมในการผลิตอาหาร

มาตรฐานด้านอาหารนับวันจะมีความสำคัญมากขึ้นในปัจจุบัน ทั้งนี้เพราะประเทศไทยเป็นประเทศเกษตรกรรมและเป็นประเทศส่งออกอาหารที่สำคัญของโลก การส่งออกอาหารไปจำหน่ายและสามารถสร้างความน่าเชื่อถือให้เกิดขึ้นกับผู้บริโภคได้นั้น จำเป็นต้องมีระบบการจัดการด้านอาหารที่เป็นที่ยอมรับ และระบบการวิเคราะห์อันตรายและจุดวิกฤตที่ต้องควบคุมในการผลิตอาหาร HACCP (Hazard Analysis and Critical Control Point (HACCP) System เป็นมาตรฐานสากลที่ยอมรับกันทั่วโลกและ นำไปใช้ในอุตสาหกรรมกันอย่างแพร่หลายมากขึ้น

ระดับของมาตรฐาน

มาตรฐานที่กำหนดขึ้นนั้น หากจำแนกโดยระดับแล้วอาจมีได้หลายระดับ (Level) ทั้งนี้ โดยพิจารณาจากการกำหนดขึ้นและการนำไปใช้ ระดับของมาตรฐานดังกล่าวแยกได้เป็น 6 ระดับที่สำคัญ ดังนี้

1. มาตรฐานระดับบุคคล (Individual Standards)

เป็นมาตรฐานที่กำหนดขึ้นโดยผู้ที่ต้องการใช้แต่ละบุคคล รวมไปถึงการกำหนดโดยแต่ละหน่วยงานเพื่อให้เป็นไปตามความประสงค์ของแต่ละคนหรือแต่ละหน่วยงานนั้น เช่น ข้อกำหนด

ในการทำเฟอร์นิเจอร์แต่ละชิ้น การออกแบบบ้านแต่ละหลัง เชื้อนแต่ละแห่ง การสร้างสะพาน การสร้างโรงงาน ทำผลิตภัณฑ์เฉพาะ ฯลฯ

2. มาตรฐานระดับบริษัท (Company Standards)

เป็นมาตรฐานที่เกิดขึ้นจากการกำหนดขึ้นโดยการตกลงร่วมกันของแผนกในบริษัท เพื่อใช้เป็นแนวทางในการออกแบบการผลิต การซื้อขาย ฯลฯ

3. มาตรฐานระดับสมาคม (Association Standards)

เป็นมาตรฐานที่กำหนดขึ้นจากกลุ่มบริษัท หรือ โดยกลุ่มบุคคลที่อยู่ในวงการค้าเดียวกัน หรือเกิดจากข้อตกลงของกลุ่มบริษัทหรือโรงงานที่มีกิจกรรมของอุตสาหกรรมเป็นอย่างเดียวกัน หรือมีการผลิตของชนิดเดียวกัน เช่น กลุ่มผู้ผลิตชิ้นส่วนรถยนต์ รถจักรยานยนต์ สมาคมอุตสาหกรรมเครื่องใช้ไฟฟ้า ฯลฯ เป็นต้น

4. มาตรฐานระดับประเทศ (National Standards)

เป็นมาตรฐานที่ได้จากการประชุมหารือเพื่อหาข้อตกลงร่วมกันของผู้เกี่ยวข้องหลายฝ่าย ในชาติ โดยมีหน่วยงานมาตรฐานของชาตินั้น ๆ เป็นศูนย์กลาง ซึ่งหน่วยงานมาตรฐานของชาตินี้อาจเป็นหน่วยงานของรัฐหรือเอกชนก็ได้

5. มาตรฐานระดับภูมิภาค (Regional Standards)

เป็นมาตรฐานที่เกิดขึ้นจากการประชุมปรึกษาหารือกันระหว่างประเทศในภูมิภาคเดียวกัน แล้วกำหนดข้อตกลงร่วมกัน ส่วนมากจะเป็นการปรับมาตรฐานระดับประเทศในภูมิภาคเดียวกัน ให้มีสาระสำคัญสอดคล้องกัน

6. มาตรฐานระดับระหว่างประเทศ (International Standards)

เป็นมาตรฐานที่ได้จากข้อตกลงร่วมกันของประเทศสมาชิกต่าง ๆ ที่มีความสนใจร่วมกัน เช่น มาตรฐานระหว่างประเทศขององค์การระหว่างประเทศว่าด้วยการมาตรฐาน (International Organization for Standardization - ISO)

หลักการของการมาตรฐาน การมาตรฐานมีหลักการที่สำคัญ ดังนี้

หลักการที่ 1 หลักของการลดแบบและขนาด

หลักการนี้ สืบเนื่องมาจากความคิดของมนุษย์ ที่ต้องการให้การดำเนินชีวิตของคนเรา เป็นไปอย่างมีประสิทธิภาพ การลดแบบและขนาดของสิ่งต่างๆ ที่มีอยู่มากมายให้เข้ารูปเข้าแบบที่เหมาะสม จึงเป็นการทำสิ่งที่ยุ่งยากให้ง่ายขึ้น ขจัดความฟุ่มเฟือยของแบบและขนาดที่ไม่จำเป็น โดยมีจุดมุ่งหมายเพื่อลดความยุ่งยากและซับซ้อนในสังคมปัจจุบัน รวมทั้งเพื่อป้องกันความยุ่งยากที่ไม่จำเป็นในอนาคตด้วย

หลักการที่ 2 หลักของการเห็นพ้องต้องกัน

การมาตรฐานเป็นกิจกรรมที่ต้องได้รับความร่วมมือจากทุกฝ่ายที่เกี่ยวข้อง ดังนั้น ในการกำหนดมาตรฐานจึงต้องอาศัยความเห็นพ้องต้องกันของทุกฝ่าย และต้องเป็นการเห็นพ้องกันที่เป็นที่ยอมรับด้วย

หลักการที่ 3 ต้องมีการนำมาตรฐานไปใช้ปฏิบัติได้

มาตรฐานแม้จะมีเนื้อหาดีแค่ไหนก็ตาม หากไม่มีใครนำเอามาตรฐานไปใช้แล้วก็คือว่า มาตรฐานนั้นเป็นเพียงเอกสารที่ไม่มีคุณค่า เพราะไม่สามารถทำให้เกิดประโยชน์จากมาตรฐานดังกล่าวได้

หลักการที่ 4 มาตรฐานต้องทันสมัยอยู่เสมอ

มาตรฐานควรจะได้รับทบทวนและปรับปรุงให้ทันสมัย เหมาะสมกับสภาพสังคมในปัจจุบันอยู่เสมอ ต้องไม่หยุดนิ่งเป็นเวลานาน โดยทั่วไปมาตรฐานทุกเรื่องจะต้องได้รับการตรวจสอบ หรือการปรับปรุงแก้ไขทุกๆ 5 ปี

หลักการที่ 5 มาตรฐานต้องมีข้อกำหนดที่จำเป็น

ข้อกำหนดของมาตรฐานผลิตภัณฑ์อุตสาหกรรมเรื่องใดเรื่องหนึ่งควรมีการระบุคุณลักษณะที่สำคัญของผลิตภัณฑ์ ประสิทธิภาพของการนำไปใช้งาน คุณภาพของวัตถุดิบ ฯลฯ โดยการกำหนดคุณลักษณะแต่ละรายการต้องชัดเจน และต้องมีข้อกำหนดวิธีทดสอบผลิตภัณฑ์ไว้ด้วย เพื่อใช้เป็นเกณฑ์ตัดสินว่าคุณภาพของผลิตภัณฑ์นั้น ๆ เป็นไปตามข้อกำหนดในมาตรฐานหรือไม่

หลักการที่ 6 มาตรฐานควรมีการนำไปใช้โดยเสรี

เชื่อกันว่าการนำมาตรฐานไปใช้โดยสมัครใจจะได้ผลดีกว่า แต่ในกรณีที่เป็นต้องมีการบังคับใช้มาตรฐาน ก็ควรจะได้มีการพิจารณาอย่างรอบคอบในทุก ๆ ด้าน

ประโยชน์ของการมาตรฐาน

การมาตรฐานอำนวยประโยชน์แก่บุคคลหลาย ๆ ฝ่ายทั้งผู้ผลิต ผู้บริโภค และต่อเศรษฐกิจ ของชาติ โดยส่วนรวมด้วย กล่าวคือ

1. ประโยชน์ของการมาตรฐานต่อผู้ผลิต ได้แก่

1.1 ลดจำนวนวิธีหรือทางปฏิบัติ เพื่อให้ได้ผลอย่างเดียวกัน ให้เหลือเท่าที่จำเป็น โดยมีการเปลี่ยนแปลงสายการผลิตให้น้อยลง ลดเครื่องมือ เครื่องจักรและเวลาที่ใช้

1.2 ลดจำนวนแบบและขนาดให้เหลือน้อยลง ด้วยการใช้แบบและขนาดที่สับเปลี่ยน ทดแทนกันได้ ทำให้สามารถใช้เครื่องจักรช่วยในการผลิตได้มากขึ้นและสิ่งของที่ผลิตขึ้นมีความ สม่่าเสมอ ในสายการผลิตเดียวกัน สามารถผลิตสิ่งของอย่างเดียวกันติดต่อกันได้นานขึ้น

เสียเวลาในการปรับตั้งเครื่องจักรเพื่อเปลี่ยนไปผลิตสิ่งของอย่างอื่นน้อยลง และประหยัดทั้งเครื่องมือในการปรับตั้ง และวัสดุที่ใช้ในการทดลองผลิต กับเปลี่ยนส่วนที่สึกหรอของเครื่องจักรได้ง่าย

1.3 ลดความยุ่งยากและค่าใช้จ่ายในการตรวจสอบ ควบคุมคุณภาพ ชดเชยอุบัติเหตุในการทำงานลดลง

1.4 ลดปริมาณวัสดุ ส่วนประกอบ อะไหล่ และสินค้าที่ต้องมีไว้สำหรับใช้และจำหน่าย

1.5 ก่อให้เกิดการเพิ่มผลผลิต ซึ่งนำไปสู่การลดต้นทุนการผลิต ราคา และเพิ่มปริมาณการขาย

2. ประโยชน์ของการมาตรฐานต่อผู้บริโภคบริโภค

2.1 ปลอดภัยในการใช้งาน และการบริโภค

2.2 สะดวก ประหยัดเงินและเวลาในการเลือกซื้อ-เลือกใช้ เพราะผลิตภัณฑ์มาตรฐาน สามารถสับเปลี่ยนทดแทนกันได้

2.3 ได้รับความเป็นธรรมในการซื้อผลิตภัณฑ์ เพราะผลิตภัณฑ์มาตรฐานจะมีคุณภาพสมราคา และสามารถเลือกซื้อได้ตามความต้องการ

2.4 สามารถซื้อหาสินค้าที่มีคุณภาพ และสมรรถนะในการทำงานได้อย่างเดียวกันในราคาต่ำลง

2.5 สับเปลี่ยนทดแทนชิ้นส่วนอุปกรณ์ที่ชำรุดหรือเสียได้ สะดวกและรวดเร็ว ไม่จำเป็นต้องเปลี่ยนใหม่ทั้งชุด

2.6 ซื้อหาส่วนประกอบและอะไหล่ที่ต้องการสับเปลี่ยนได้ง่าย

3. ประโยชน์ของการมาตรฐานต่อเศรษฐกิจโดยส่วนรวม หรือประโยชน์ร่วมกัน ได้แก่

3.1 ทำให้เกิดความสะดวกในการติดต่อสื่อสาร เพราะมีความเข้าใจที่ตรงกัน

3.2 ประหยัดกำลังคน การใช้วัสดุและเวลา ลดค่าใช้จ่าย ในการจัดหา การส่งสินค้าออกสู่ตลาดการใช้บริการ ทำให้สามารถลดต้นทุนการผลิตและราคาจำหน่ายลงได้

3.3 การสร้างพื้นฐานในการเปรียบเทียบ ก่อให้เกิดความยุติธรรมในการซื้อขายและเป็นพื้นฐานการแข่งขันในเชิงการค้า

3.4 ประหยัดการใช้ทรัพยากรธรรมชาติของประเทศ เพราะสามารถใช้ทรัพยากรของประเทศให้เกิดประโยชน์สูงสุด

3.5 สร้างความนิยมเชื่อถือในสินค้าที่ผลิตขึ้น แก่ผู้ใช้ทั้งในประเทศและต่างประเทศ ขยายตลาดสินค้าอุตสาหกรรม อันเป็นการสร้างพื้นฐานที่มั่นคงให้แก่กิจการอุตสาหกรรมและพัฒนา การเศรษฐกิจของประเทศ

ผลิตภัณฑ์ที่แสดงเครื่องหมายมาตรฐานมีความหมายอย่างไร

ผลิตภัณฑ์ที่ได้รับอนุญาตให้แสดงเครื่องหมายมาตรฐานต้องเป็นผลิตภัณฑ์ที่สำนักงาน มาตรฐานผลิตภัณฑ์อุตสาหกรรม(สมอ.) ตรวจสอบแล้วว่ามีคุณภาพเป็นไปตามมาตรฐานที่ประกาศ กำหนดตามพระราชบัญญัติมาตรฐานผลิตภัณฑ์อุตสาหกรรม พ.ศ.2511 การตรวจสอบของ สำนักงานฯ เป็นการตรวจสอบตัวอย่างผลิตภัณฑ์ที่สุ่มเก็บจากโรงงานว่ามีคุณภาพเป็นไปตาม มาตรฐานหรือไม่ ตรวจสอบระบบการผลิตและระบบการควบคุมคุณภาพของโรงงานว่าอยู่ในเกณฑ์ ที่เหมาะสมและสามารถรักษาคุณภาพได้ตลอดไปหรือไม่ เมื่อผ่านเกณฑ์ที่กำหนด สำนักงานฯ ก็จะ ออกใบอนุญาตให้ผู้ผลิตแสดงเครื่องหมายมาตรฐานที่ผลิตภัณฑ์นั้นได้ ทั้งนี้ผู้ได้รับใบอนุญาต จะต้องปฏิบัติตามเงื่อนไขที่กำหนดด้วย

หลังจากนั้น สำนักงานฯ จะตรวจสอบติดตามผลการแสดงเครื่องหมายมาตรฐาน โดยการ ตรวจสอบระบบการควบคุมคุณภาพของโรงงาน และสุ่มตัวอย่างผลิตภัณฑ์ทั้งจากโรงงาน สถานที่ นำเข้า และสถานที่จำหน่าย มาตรวจสอบอย่างสม่ำเสมอ เพื่อให้แน่ใจได้ว่าผลิตภัณฑ์ที่แสดง เครื่องหมายมาตรฐาน มีคุณภาพเป็นไปตามมาตรฐาน และโรงงานยังสามารถรักษาคุณภาพไว้ได้ สม่ำเสมอ

เครื่องหมายมาตรฐาน เครื่องหมายแห่งคุณภาพ

1. เครื่องหมายมาตรฐานทั่วไป

มาตรฐานทั่วไป

เป็นมาตรฐานที่กำหนดเพื่อให้การรับรองคุณภาพผลิตภัณฑ์ โดยทั่วไป โดยผู้ประกอบการที่ทำผลิตภัณฑ์สามารถยื่นขอ ใบอนุญาตแสดงเครื่องหมายมาตรฐานได้ด้วยความสมัครใจ เมื่อ สำนักงานฯ ได้ตรวจสอบโรงงาน กรรมวิธีการผลิต และทดสอบ ผลิตภัณฑ์และเป็นไปตามเกณฑ์ที่กำหนดแล้ว สำนักงานฯ ก็จะ อนุญาตให้แสดงเครื่องหมายมาตรฐานที่ผลิตภัณฑ์นั้นได้



เครื่องหมายมาตรฐานทั่วไป

2. เครื่องหมายมาตรฐานบังคับ

มาตรฐานบังคับ

เป็นมาตรฐานที่กำหนดขึ้นเพื่อความปลอดภัย และเพื่อป้องกัน



ความเสียหายอันอาจจะเกิดแก่ประชาชนหรือกิจการอุตสาหกรรม หรือเศรษฐกิจของประเทศ โดยการตราพระราชกฤษฎีกากำหนดให้ผลิตภัณฑ์นั้นๆ ต้องเป็นไปตามมาตรฐาน หรือที่เรียกว่า มาตรฐาน บังคับ ซึ่งผู้ผลิต ผู้จำหน่ายและผู้นำเข้าจะต้องผลิต จำหน่ายและนำเข้าแต่ผลิตภัณฑ์ที่ได้มาตรฐาน ตามที่สำนักงาน ฯ ประกาศ กำหนดเท่านั้น หากไม่กระทำตามจะมีความผิดตามกฎหมาย

3. เครื่องหมายมาตรฐานเฉพาะด้านความปลอดภัย

มาตรฐานเฉพาะด้านความปลอดภัย

เป็นมาตรฐานที่กำหนดขึ้นสำหรับผลิตภัณฑ์บางชนิดที่ต้องคำนึงถึงความปลอดภัยในการใช้งานเป็นสำคัญ เช่น ผลิตภัณฑ์ไฟฟ้า เพื่อให้การรับรองคุณภาพผลิตภัณฑ์และสร้างความมั่นใจในความปลอดภัยให้กับผู้ใช้งาน โดยผลิตภัณฑ์ที่ผ่านการตรวจสอบแล้ว จะแสดงเครื่องหมายมาตรฐานเฉพาะด้านความปลอดภัย มีลักษณะเป็นรูปตัวเอส มีคำว่า "ปลอดภัย" อยู่ตรงกลาง



เครื่องหมายมาตรฐาน
เฉพาะด้านความปลอดภัย

4. เครื่องหมายมาตรฐานเฉพาะด้านสิ่งแวดล้อม

มาตรฐานเฉพาะด้านสิ่งแวดล้อม

ปัญหาเรื่องสิ่งแวดล้อม เป็นปัญหาสำคัญของทุกคน สมอ. ได้ประกาศกำหนดมาตรฐานเฉพาะด้านสิ่งแวดล้อมขึ้นมา เพื่อให้การรับรองผลิตภัณฑ์ที่มีคุณสมบัติในการรักษาสิ่งแวดล้อมตามมาตรฐานเฉพาะด้านสิ่งแวดล้อมที่ สมอ. กำหนดขึ้นเครื่องหมายมาตรฐานนี้เป็นทั้งมาตรฐานบังคับและมาตรฐานทั่วไป กรณีที่เป็นมาตรฐานบังคับกฎหมายบังคับให้ผู้ผลิต ผู้นำเข้าและผู้จำหน่ายจะต้องผลิต นำเข้า และจำหน่ายเฉพาะผลิตภัณฑ์ที่เป็นไปตามมาตรฐานเท่านั้น โดยผลิตภัณฑ์ที่ผ่านการตรวจสอบแล้วสามารถนำเครื่องหมายเฉพาะ ด้านสิ่งแวดล้อม ซึ่งมีลักษณะเป็นรูปตัวเอส มีคำว่า "สิ่งแวดล้อม" อยู่ตรงกลาง



เครื่องหมายมาตรฐาน
เฉพาะด้านสิ่งแวดล้อม

5. เครื่องหมายมาตรฐานเฉพาะด้านความเข้ากันได้ทางแม่เหล็กไฟฟ้า

มาตรฐานเฉพาะด้านความเข้ากันได้ทางแม่เหล็กไฟฟ้า

กล่าวได้ว่า ปัจจุบันเป็นยุคของเทคโนโลยีทางด้านอิเล็กทรอนิกส์

สมอ. ได้ประกาศ กำหนดมาตรฐานความเข้ากันได้ทางแม่เหล็กไฟฟ้าขึ้น เพื่อให้การรับรองผลิตภัณฑ์ที่มีคุณสมบัติของความเข้ากันได้ทางแม่เหล็กไฟฟ้าว่าเป็นไปตามมาตรฐานที่ สมอ. กำหนดขึ้น เช่น ชิ้นส่วนคอมพิวเตอร์เครื่องหมายมาตรฐานนี้เป็นทั้งมาตรฐานบังคับและมาตรฐานทั่วไป กรณีที่เป็นมาตรฐานบังคับกฎหมาย

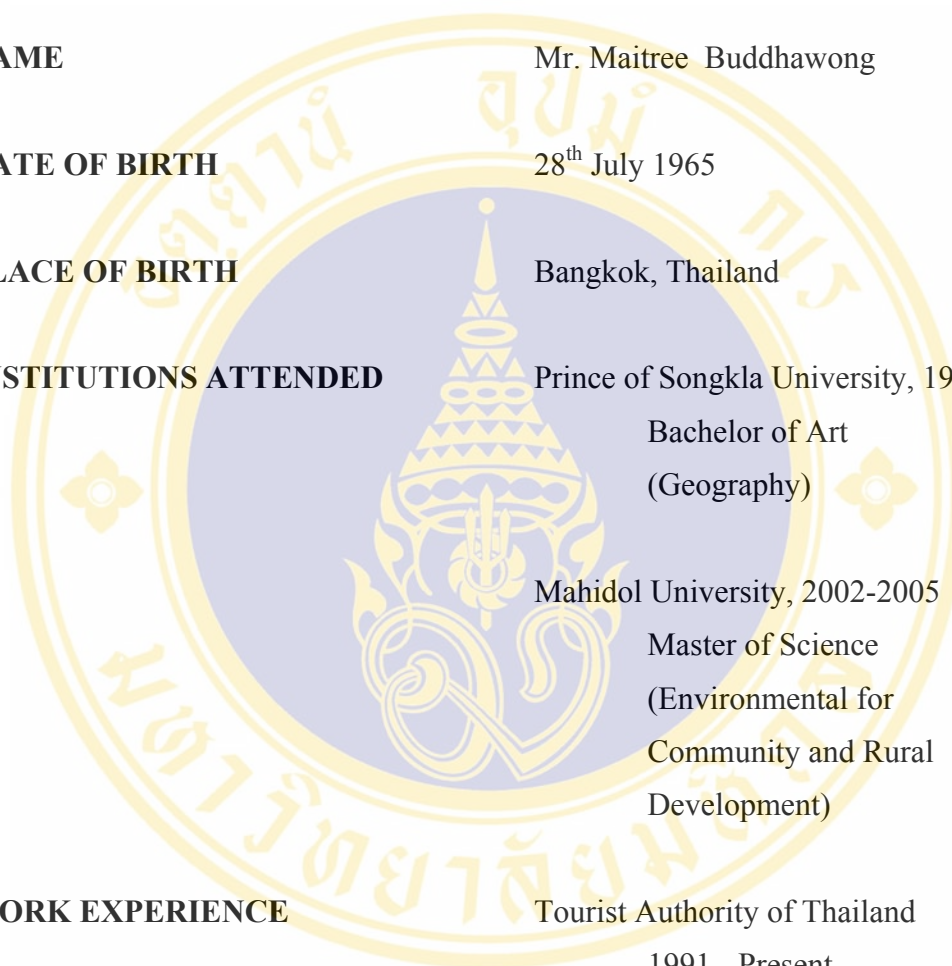
บังคับให้ผู้ผลิต ผู้นำเข้า และผู้จำหน่าย จะต้องผลิต นำเข้า และจำหน่ายเฉพาะผลิตภัณฑ์ที่เป็นไปตามมาตรฐานเท่านั้น ผลิตภัณฑ์ที่ผ่านการตรวจสอบแล้ว สามารถนำเครื่องหมายมาตรฐาน เฉพาะด้านความเข้ากันได้ทางแม่เหล็กไฟฟ้า ซึ่งมีลักษณะเป็นรูปตัวเอส มีคำว่า "EMC" อยู่ตรงกลาง



เครื่องหมายมาตรฐานเฉพาะด้านความเข้ากันได้ทางแม่เหล็กไฟฟ้า



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