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PREFACE

The activities of the International Conference is in line and very appropriate with the vision and mission of the UBL to promote training and education as well as research in these areas.

On behalf of the First International Conference of Engineering and Technology Development (ICETD 2012) organizing committee; we are very pleased with the very good responses especially from the keynote speakers and from the participants. It is noteworthy to point out that about 45 technical papers were received for this conference

The participants of conference come from many well known universities, among others: Universitas Bandar Lampung, International Islamic University Malaysia, University Malaysia Trengganu, Nanyang Technological University, Curtin University of Technology Australia, University Putra Malaysia, Jamal Mohamed College India, ITB, Mercu Buana University, National University Malaysia, Surya Institute Jakarta, Diponegoro University, Unila, Universitas Malahayati, University Pelita Harapan, STIMIK Kristen Newmann, BPPT Lampung, Nurtanio University Bandung, STIMIK Tarakanita, University Sultan Ageng Tirtayasa, and Pelita Bangsa.

I would like to express my deepest gratitude to the International Advisory Board members, sponsors and also welcome to all keynote speakers and all participants. I am also grateful to all organizing committee and all of the reviewers which contribute to the high standard of the conference. Also I would like to express my deepest gratitude to the Rector which give us endless support to these activities, such that the conference can be administrated on time.

Bandar Lampung, 20 Juni 2012

Mustofa Usman, Ph.D
ICETD Chairman

PROCEEDINGS
The First International Conference in
Engineering and Technology Development
(ICETD 2012)

UNIVERSITAS BANDAR LAMPUNG
Bandar Lampung, Indonesia
June, 20-21 2012

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Designing and Planning Tourism Park with Environment and Quality Vision and Information Technology-Based (Case Study: Natural Tourism Park Raman Dam)

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Abstract—At present, the role of tourism ranked as the largest industry in Indonesia even in the world and is an economic sector that has a very rapid growth and potential jobs provider. One of a growing tourism sector in Indonesia is a natural tourist attractions, Raman Dam as one of the natural tourism potential of its existence cannot be developed and managed properly. Tourism Park (TW) Raman Dam site planning pays attention to several aspects: Environmental Issues, The Past Metro and alignment of surrounding communities.

TW Raman Dam construction, is expected to have a vision to improve people's lives around it. Apart from the economic, education and participation concerning tourism are expected to form it to the surrounding community.

International Standard ISO 9001:2008 which specifies requirements for quality management systems for Raman Dam Park that need to be continually demonstrated its ability to produce good service to visitors and stakeholders, as well as an environmental management system (EMS) ie ISO 14001:2004 standard is as of the overall management system which includes organizational structure, planning activities, responsibilities, implementation procedures, in terms of the tourism information system, supported by e-tourism in a simple understanding can be defined as a computer-based system that provides information for several users with similar needs.

Keyword—Quality Management System, Environment, e-tourism

I. INTRODUCTION

1.1. Background

Tourism sector is one of Indonesia leading sectors that have significant value and benefit to the advancement of local and global economy, the tourism sector since it was listed as the largest industry in Indonesia even in the world and is an economic sector that has a very rapid growth and a lot of employment providers. One of a growing tourism sector in Indonesia is the natural

attraction, it can attract the attention of many tourists for its natural beauty.

Judging from the structure of Metro City's economy, the tourism sector has not contributed to the PDRB of Metro City. This is because the Metro City Area included as an area that has a lack of tourist attraction, besides it is also a lack of development of the existing tourism and tourism potential that can be used as the object of tourist destinations. And if the tourism sector can be developed and managed well, it is really expected to increase tourist attraction as well as increasing the revenue (PAD) and the economic growth of the tourism sector and per capita income of the community.

Raman Dam as one of the natural tourism potential of its existence cannot be developed and managed properly. Natural tourist sites are located in the Village Purwoasri, North Metro District is directly adjacent to the Regency of Central and East Lampung. Raman Dam area has a total area of 26 hectares consisting of 24 hectares of land Ex. Bengkulu and 2 ha of forest *sengon trees*, entrance to the location of the Raman Dam Park is Komodo Street. Raman Dam area has the potential to be used as a potential tourist attraction. Nature of the potential at the location of this Raman Dam Park is a dam which is quite large with a fairly dense trees and lush agricultural potential that can be used as water tourism and agricultural tourism (Agro-Tourism).

1.2. Vision, Mission, Goals and Objectives

Raman Dam Park Vision is to be the largest park in Lampung province which has environmental vision, uniqueness of the Colonization theme (the history of Metro City), is educative, community based, and able to reach out to various levels of society. Time period for achieving the vision of Raman Dam Park is 10 years.

While The Raman Dam Park Missions are:

1. Having a variety of unique attractions and with the highest number in the province of Lampung.
2. Establishing and maintaining environmental conservation in Raman Dam Park.
3. Building and preserving knowledge about historical and cultural City of Metro through various tourism objects.
4. Building a community-based tourism.
5. Providing a variety of tourism objects that are able to reach all levels of society in accordance with the character of the target market.
6. Involving the city's cultural arts or arts and culture of Metro Lampung into any mode and component of Raman Dam Park.
7. Utilizing human resources from communities around the Raman Dam Park.
8. Building modes of tourism objects, tourist elements and attraction according to the character of the target market.

II. METHOD

- 1.3. Objectives and Targets
Objectives and Targets of Raman Dam Park are as follows:
 1. Building the appropriate vehicle for tourism to the area of Raman Dam.
 - a. Building agro-themed tourism objects.
 - b. Building tourism objects that utilize condition of the river around the dam of Raman.
 2. Building 10 kinds of tourism object vehicles.
 - a. Building agro parks, playgrounds, botanical garden, recreation area, camping, outbound area, dining area, an area of water attractions, area lodging, and tourist villages.
 - b. Building a vehicle museum, waterboom, amphitheater, tourist cabin, jogging area, area cycling, ATV area, canoe area, area gig, shuttle bus, and gift shop.
 - c. Building the night market on a regular basis.
 3. Integrating tourism object modes with a natural sense.
 - a. Designing a variety of modes and objects in the Raman Dam Nature Trail with a natural sense.
 - b. Designing a natural atmosphere of Raman Dam Park as a tourist attraction modes.
 4. Building modes and all components of the Raman Dam Park with the theme of colonization.
 - a. Designing a variety of rides and objects in the Raman Dam Park with the feel of colonization.
 - b. Designing HR Raman Dam Park for the style of colonization.
 5. Integrating the story with the history of Metro city with the modes of Raman Dam Park.
 - a. Displaying a "living museum" that the city's history themed modes and Metro on each component of the Raman Dam Park. The purpose of the "living museum" here is the human resources and manpower to themed lifestyle colonization.
 - b. Designing stories in the history of Metro City "inanimate objects" on each mode and component Raman Dam Park. The purpose of the "inanimate objects" here are paintings, photographs, building form, and writings.
 6. Integrating cultural city with rides Metro Raman Dam Park.
 - a. Arranging the layout of the modes and component of Raman Dam Park in accordance with the layout of the city of Metro.
 - b. Involving the city's cultural arts or arts and culture of Metro Lampung into any mode and component of Raman Dam Park.
- 2.1.2 Materials and Devices
Materials used in this study include: 1) Map RBI scale of 1: 50,000, 2) map area, and 3) questionnaire (visitors and the community). While the tools used in this study include: 1) GPS Garmin 12 CX, 2) pocket camera, 3) camera telezoom, 4) binocular, 5) handycam, 6) tape recorder, 7) computers, 8) theodolites horizontal, and 9) stationery
 - 2.1.3. Activities Survey
In the field survey, conducted stages, namely: the orientation of the field, the identification and inventory of tourism resources and its components as well as observing the condition of the demographic community and visitors.
 - 2.1.4. Data Analysis
Analysis of Tourism Development in Raman Dam viewed from the side of the preparations (Supply) and Interest Level (Demand), designed to cover all the potential of tourism resources (supply) and the characteristics of the market / consumer (demand). The main focus of this research is the study of:
 - 1) The tourist objects and attractions, 2) the characteristics of the surrounding community, 3) supporting resources (facilities and infrastructure, and institutional management, accessibility and accommodation, tourism and human resources), 4) good tourism policy center (in tourism and forestry) and local policy (the City), 5) visitor perceptions and motivation, and 6) the potential and problems of the region.
 - 2.1.5 Types and Sources of data
Preparation of tourism development plan will be made after all the data obtained are analyzed. From these data will be obtained a comprehensive tourism development plan. Raman Dam with a foundation of concepts and a clear strategy.
The type of data used consists of primary data and secondary data. Primary data is data obtained from the field, while the secondary data is contained in the data base in Raman Dam and some literatures.
The primary data required in this activity are:
 1. Tourism resource and its components (vegetation, wildlife, water resources, scenery, artificial, cultural sites and communities, where a distinctive and unique) as well as tourist attractions that have a selling value (selling value);

2. Perceptions, and motivations of visitors to see the demand coming from the tourist objects and attractions of actual and potential characteristics of tourists, tourist activities and attractions that appeal to tourists; Secondary data are taken in the form:

1. General state Raman Dam that have relevance to tourism development (location, size, status, climate, topography and soils, hydrology, etc.);
2. Policies governing the activities of tourism in the Raman Dam;
3. Other data as supporting data related to this activity.

a. Data Collection Method

Data collection methods mentioned above will be done gradually, by way of book study, field observation and direct observation in the field.

b. Library Studies

Literature is the initial activity of a research activity that is the success of primary data collection. The data will be collected through various information media, such as textbooks, brochures, documents, which support research and policy and legislation governing.

c. Field observations

Field observations made directly in the Raman Dam area. This activity aims to look at the general condition of the region related to the purpose of research, where the activities will be conducted by way of interviews with stakeholders and observations of the field quickly. Field data collection will be done in two activities, namely: orientation and interviews.

2.1.6 Data Analysis Techniques

a. Descriptive Analysis

Descriptive analysis is used to describe the overall descriptive of the objects and attractions owned by the park, facilities and infrastructure conditions, policies and forms of management development areas.

III. ANALYSIS OF CIRCULATION AND ACTIVITIES

3.2.1. Circulation analysis of Raman Dam Nature

Trail Circulation network intended to connect the space, objects and attractions to one another in a travel path for a certain period of time effectively and efficiently. Plan of the circulation path of lane loop model with a path in and out of tread on the same track. Circulation path is divided into three types of circulation path, which is the primary line, secondary line and tertiary line. The division into three types of pathways is intended to create order, to safeguard the interests and functions of each room as well as to create convenience for travelers when visiting.

Pola Sirkulasi Pengelola dan pengurus Fasilitas rekreasi dan fasilitas inap



Figure 1. Circulation patterns Executive and Management

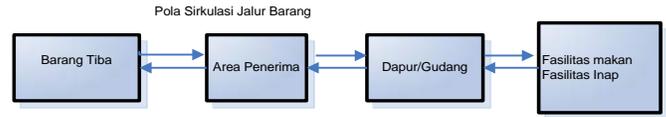


Figure 2. Circulation patterns of Line Items

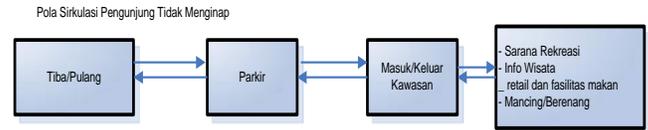


Figure 3. Circulation Patterns That Visitors Do Not Stay

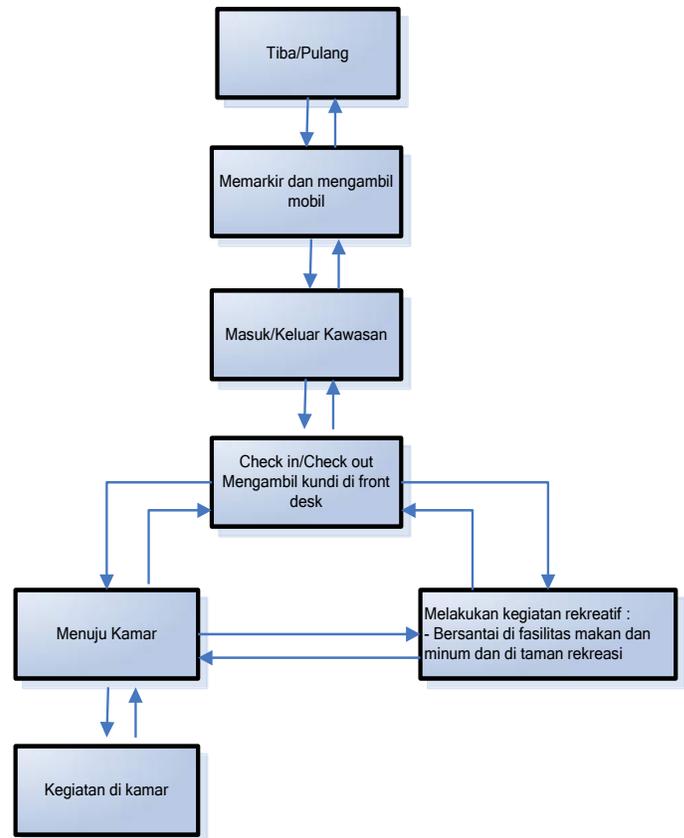


Figure 4. Circulation patterns of visitor stay

I. Activity Analysis of TW DAM Raman

TABLE 1.
NEEDS ANALYSIS OF THE TW DAM RAMAN

No.	Persons	Activities	Facilities/Needed Rooms
1.	Tourists are not staying	Sitting, recreational water and land, eating the restaurant, visiting tourism center, shopping	Water recreation facilities, recreation facilities on land, restaurants, snacks centers, souvenir stalls, tourist information centers etc.
2.	Tourists are staying	Sitting, water and land recreation, dining, visiting the tourism center, shop, stay, watch the show at night, watch the sun rise, etc.	Water recreation Facilities, recreational facilities on land, stay facilities, hotel reception area, bar, restaurant, cheap snacks centers, souvenir stalls, tourist information centers etc.
3.	Trader	Come in, drop out of goods, bringing goods into the stalls, and go home and rest	Stalls, warehouses, public facilities, loading dock area.
3.	Tourism Area Management	Come, car parking, put bags in locker, go home and rest.	Employees' Parking area, working room, lockers, dinning room, tower view, controlling areas.
4.	Stay Facility Manager	Come, car parking, put bags in locker, go home and rest.	Employees' Parking area, working room, lockers, dinning room, service division.

1.1. Object and Tourist Attractions

Attraction or a tourist attraction at the heart of the tourism industry which is unique, characterized, and the attraction for visitors is a tourist area. Optimization attractions is one way of preserving the natural, cultural and man-made artifacts. Mainstay attractions in TW Dam Raman can be categorized into the following themes:

1.1.1. Entertainment and Recreation

Themes embodied in the entertainment and recreational attractions are planning good potential to appreciate the natural beauty and cultural potential of the beauty of the performing arts as a major attraction for visitors, such as procurement pavilion-style pavilion with traditional architecture in which visitors can see different views of the works of art and typical for the culture of each region in Metro City, then equipped with gardens around it as a place of recreation, arts and theater and amphitheater facilities for the exclusive tour, will be designed a building hotels and resorts that are placed on the highest plateau in the TW Raman Dam.

Water and Land Recreational activities to do in Tourism Park of Raman Dam Other:

- Relaxed in the water (just enjoy the view)
- Relax in the Mainland / Site (using Local Transport, like Delman)
- Fish
- Swimming and playing in water
- Aquatic sightseeing tour by boat, Canoe, Water Balloons, water bikes
- And Performing Arts Market (Amphi Theater)
- Outbound

1.1.2 Education and Agro Tourism

As an integrated tourism area, except as a means of entertainment and recreation, would be a positive value and appeal if the theme of education or special education may be the concept of interactive attractions such as for example the training hall and art crafts that will be seeded in the traditional village area, building or gallery Museum information on parks, halls in the area of agro superior breeding, fish farming and ranching center, and so forth.

4.1.2.1. Developing Tourism Village

The principle of the development of rural tourism is one of alternative tourism products that can provide the impetus for sustainable rural development as well as have the principles of management, among others, are:

- utilize local community facilities and infrastructure,
- benefit the local community,
- small-scale to facilitate reciprocal relations with the local community,
- involve the local community,
- implementing the development of rural tourism product.

4.1.3.3. Conservation

The theme of this conservation, the attractions is the attraction that aims to appreciate the conservation efforts of both the culture and nature as for example in the form of the creation of agro-tourism area in the form of plantations and rice fields, areas, traditional village, the cultivation of plants Sumatra, Law no. 32 of 1990 on protected areas, to the reservoir *sempadannya* 100 m, to the river width is less than 30 m wide river, 50 m either side of the border. While for the more than 30 m, demarcation of more than 100 m, then the potential to be a mini garden, rare plant can be planted or native Sumatra.

1.2. Tourism Facilities

Means of the facilities at the site potential to support a variety of activities because it can provide convenience and comfort during their stay at Park of Raman Dam. The successful development of the site as a Park one of them is the availability of supporting facilities tours.

The facility consists of a public facility entrance gates, counters, gatehouse, office management and information centers, parking

areas, parks and pedestrian lights, benches, garbage cans, sign board, kiosk sales and social facilities such as toilets and mosque. The existence of these facilities intended to accommodate the needs of tourists and locals. Plan type and layout of these facilities is based on the spatial plan and circulation.

4.3 Information Management System e-tourism

Information systems in a simple understanding can be defined as a computer-based system that provides information for multiple users with similar needs. Users are typically incorporated in a formal organizational entities, such as department or agency of a government agency that can be translated into Directorate, Division, Section until the smallest unit underneath. Information describing the organization or one of the main system of what has happened in the past, what is happening now and what might happen in the future of the organization.

TW Raman Dam site planning takes attention to several aspects:

1. Environmental Issues

Raman TW Dam construction site, but is intended as a vehicle for recreation, as well as a vehicle for environmental education for visitors. In order for the preservation of nature is always maintained and utilized properly. The location is built, the aspect of environmental conservation and sustainable.

2. First Metro Tempo

In addition in terms of education and recreation, TW Raman Dam has a diversity of cultural, ethnic, religious history that has formed from since very long time ago, then, by building TW Raman Dam it will have a feeling of history that was built back in TW Raman Dam, Metro Tempo themes used in the combination of other themes. It will pick the meaning of the aesthetic and historical value.

3. Alignments of the surrounding communities

TW Raman Dam construction, is expected to have a vision to improve people's lives around it. Apart from the economic, education and participation concerning tourism are expected to form good for the community surroundings.

Designing and planning are developed based on the analysis and conception of the development potential of TW Raman Dam, then the block plan as defined in Fig. Footprint to develop is divided into three stages of development.



Figure 5. Master plan TW Dam Raman

Space consists of public and private space / Intensive. The division of space is intended to accommodate all the needs of tourists visiting and local residents to not damage the existing site conditions which are a major attraction for tourism activities. For public space that does not need to purchase tickets, being around the gate, made a tourist attraction pedestrian and fishing.

Development space is divided into several sub-spaces, namely sub-recipients and sub-space room service. Sub space is the recipient of the main entrance area (welcome area) leading to the site. The facilities provided in this space form the entrance to the leading edge of the tread. The architecture of the building entrance and other support is the form that has a footprint in order to have a character of unity on the site.

Sub space services contained on the site serves as a central area of tourism activities that are serving all the needs of tourists who visit, whether in the form of goods and tourism services. The facilities provided in this space include parking area, information center and office manager. There are also other tourist support facilities such as souvenir shops, food stalls and refreshments, prayer room, toilets and so forth. Circulation network intended to connect the space, objects and attractions to one another in a travel path for a certain period of time effectively and efficiently. Plan of the circulation path of tram lines which are connected with the model using modes of transportation Delman, Nor four-wheeled vehicles.



Figure 6 Site Planning waterboom

Planning in the first year to second year, which has priority is Boom in Tread Water Development TW Dam of Raman, approximate area of 4 hectares, is the largest water boom area in the province of Lampung. Area is determined by aspects: the topography, suitability of land types, view area of view, as well as accessibility.

Waterboom planned development consisting of several spacecraft, adjusted for age and type of available rides. Some of the activities that a tourist attracts in waterboom namely:

Swimming (original pool)

- Free flow / Flow River / Lazy River.
- Family Wave Pool.
- Kids Mini **Sliding**
- Multi-lane slides / Slides Rider
- High Thrill Slides / Dropdown slides
- Inner Tube Giant Slides for the entire family.
- Kids Kingdom
- Aqua Play Features Rain forest trees type
- Inner Tubes Slides / Original Slides
- Sun bath
- Further development in the second stage, is the development of Smart Park and its play ground. Parks built a smart suggestion to introduce the knowledge and technology to the people who packed into a tourist destination. Planned park is owned by smart TW Raman Dam as the embodiment of the vision of one Metro City to include education as the hope of Metro City.



Figure 7 Smart Park

- Water recreation development of water recreation, such as the development of the floating restaurants, attractions water bikes, water balloons and mini ferry, is the second stage of development.



Figure 8 Water Recreation Site Planning



Figure 9 Restaurant and Tourism Lake

- Development of a TW Raman Dam restaurant in the middle of the lake, Restaurant for visitors who want to take a longer time at the lake as one of the tourist facilities, and visitors can enjoy the beauty of the lake while eating snacks that offer here. Facilities available, there are mini ferry that can take tourists around the lake to enjoy the sights and attractions using water duck.



Figure 10 Photo-gate restaurant

- Village Tourism The third stage of development, is developing rural tourism, which aimed for the development of handicrafts, home industries and the preservation of local culture. Development of rural tourism in TW Raman Dam footprint exploiting resources in rural areas resulting in little or no metroat all harmful influences, increase producing and protection for the environment and culture.



Figure 11 Development-Tourism Village

Development of rural tourism site to share in the traditional life of the population of all the Metrocities. Tourists will be taken to a site that resembles the villages which are natural and will be treated well, a comfortable accommodation, local food and drink and a welcome that would be characteristic of rural tourism Raman Dam. Examples of local crafts will be on display and can be purchased by tourists. Local attractions, is shown to tourists by a trained guide. Traditional houses that are characteristic of a Metrocity where tourists will stay and interact with the residents.

Unspoiled scenery made beautiful, quiet atmosphere in the deas is a characteristic that will be formed and distinct from the city, and

friendly population and a high sense of family, but it adds to the knowledge of rural life.

Main Entrance

Main entrance is a reception room on the tread sub. Serves as a gateway to the entrance and exit site for tourists. On the inner side of the gate provided the gatehouse. Gate building using architectural design of buildings past and the Dutch East Indies with the name plateau the upper side of the gate to be clearly visible to the tourists

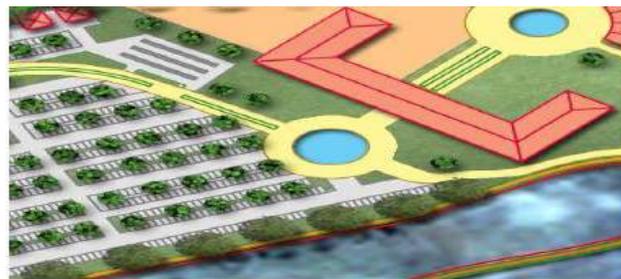


Figure 12 Site Planning Main entrance



Figure 13 Tourist Park Area

IV. CONCLUSIONS AND SUGGESTIONS

Considering the vision, mission, then the conclusions in the Development of TW Raman Dam include: Development Plan and Environmental Quality Management System based on Information Technology. Development in terms of transportation, there should be a public transport route / routes provided to the TW Raman Dam or create a terminal. Park Masterplan result of this Raman Dam, the next step is the preparation of a detailed plan design (DED). So the end result will provide an overview the development of Raman Dam Park destinations Feasibility Study and Preparation of Development Economics TW Raman Dam. Coordination between cross-district, the development potential of TW Raman Dam, for example coordination with stakeholders, especially for Central and Eastern Lampung Districts and international access through

land to the TW Raman Dam. Improving the Role and Capacity of Local Communities.

TW Raman Dam management should enhance the role and capacity of communities, ranging from planning, procurement of seeds, planting, maintenance, supervision, organization of infrastructure and facilities. In order to optimize the role of the community needs to increase community capacity and skills, as well as assistance in the implementation of activities.

Through this strategy is expected to increase local ownership and local responsibility in the management of TW Raman Dam. Strengthening Institutional

Management of TW Raman Dam. Mechanism and the role of the rule of TW Raman Dam management activities, both on land and land owned by the state, formulated with the involvement of all stakeholders. Synergized by the presence of traditional institutions of local government institutions in urban forest management, so that the vertical and horizontal coordination occurs optimal, effective and efficient. Brought KISS (Coordination, Integration, Synchronization and synergistic) in TW Raman Dam stated that TW Raman Dam Region has no activities conducted by various institutions / agencies, it is necessary for coordination, integration, synchronization and synergy among stakeholders, including government, public, private and NGOs. Thus there is no overlap of interests between sectors, but each sector has a role each.

Building a forum in Maintenance of Environmental Quality. TW Raman Dam maximise its function when the plant well planted. Therefore it is necessary to build unity in the maintenance of environmental quality so that there is involvement of all stakeholders, including government (relevant agencies) and communities in the development and maintenance of urban forests.

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