



YAYASAN  
HASANAH  
A foundation of Khazanah Nasional



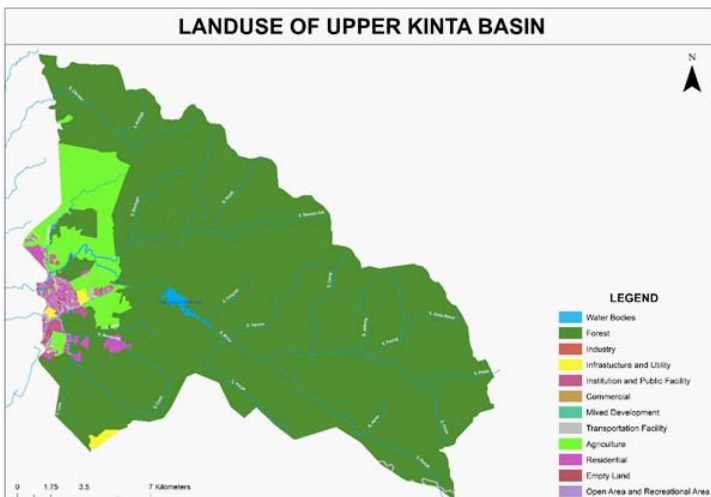
# UPPER KINTA BASIN MANAGEMENT STRATEGY

# INTRODUCTION

Upper Kinta Basin Management Strategy (UKBMAS) developed in 2019 under Integrated Management of Kinta River Basin for Community and Ecosystem Services through Active Community and Stakeholder Participation Project. The project initiated by Global Environment Centre (GEC) and Yayasan Hasanah with key support from Department of Irrigation and Drainage, Perak, Ipoh City Council, Department of Environment, Perak, Perak Forestry Department and Orang Asli Welfare Department (JAKOA). UKBMAS serves as guidance and reference document for all stakeholders to manage Upper Kinta Basin effectively. UKBMAS has four (4) goals with 23 strategies. The project aspires to bring together the governing agencies, local communities, and private sectors in a bottom-up integrated approach to managing and conserving the forest and rivers in the Mukim Hulu Kinta (MHK) and to streamline the forest and riverine habitat conservation into development planning and policies. In this project, the local community is seen as a critical component of managing water resources as a soft-path management instrument.

## UPPER KINTA BASIN (UKB)

The Upper Kinta River Basin (UKB) in Perak covers about 31,470 ha above Ipoh city in Perak. It provides a critical role in safeguarding the water supply for Ipoh City and for biodiversity conservation. It is also the home and traditional territory for a range of local stakeholders, especially the Orang Asli (OA) communities, including Kg Pawong, above Sultan Azlan Shah dam and Kg Chadak, Kg Tonggang, Kg Suluh, Kg Makmur, Kg Tonggang as well as Kg Choh, located below the dam. Figure below shows the map of Upper Kinta Basin (UKB) and its land use.



# SCOPE OF MANAGEMENT STRATEGY

It functions as a primary water catchment area and habitat for key flora and fauna. This strategy covers conservation and preservation of targeted area through key stakeholders. Key stakeholders such as government agencies (Forestry Dept., Drainage & Irrigation Dept.), orang Asli communities, local communities, and private agencies. The strategy outlines as key goals identified under this strategy. The strategies include description and key action plans beside the key performance indicators (KPI) that can be measured and monitored for each goals.

# RATIONALE OF STRATEGY

Serve as main guidance and reference for stakeholders especially government agencies, as well the communities and private sectors to plan and implement respective activities that lead to conserved Upstream of Upper Kinta Basin (UKB).

# GOALS, STRATEGIES AND KPI FOR UKB MANAGEMENT STRATEGY

## Goal 1: To sustainably manage biodiversity in the Upper Kinta Basin (UKB)

### OBJECTIVES

1. To conserves forests and related biodiversity in the Upper Kinta Basin (UKB)
2. To reduce the sedimentation of water courses and water bodies and prevent downstream pollution in the UKB

### STRATEGIES

1. Delineation of Catchment Forest Boundaries and restriction of access

#### ACTION PLAN

- Identify and map UKB boundary (including district, council, forest reserve, Geopark, water catchment) and identify requirements for each jurisdiction
- Enhance Boundary marking for water catchment forest boundaries
- Installation of signboards (Agency or District office)
- Control of access through permit system (Forestry/LAP/ etc)
- Control extractive use/hunting
- Guidelines on any access and activities

<b>KPI</b>	
<ul style="list-style-type: none"> <li>• Percentage of delineation carried out</li> <li>• Number of access restriction</li> <li>• Rate of annual changes in catchment forest boundaries</li> </ul>	<ul style="list-style-type: none"> <li>• Inclusion of UKB within CFS as linkage</li> <li>• Provision of ESA Class for UKB</li> </ul>
<b>MONITORING METHODS</b>	
<ul style="list-style-type: none"> <li>• On site survey</li> <li>• Geographical Information System (GIS)</li> <li>• Satellite Survey</li> </ul>	<ul style="list-style-type: none"> <li>• Maps</li> <li>• CFS report</li> </ul>
<b>LEADING STAKEHOLDERS</b>	
<ul style="list-style-type: none"> <li>• Perak State Forestry Department</li> <li>• Perak State Exco on Health, Science, Environment and Green Technology</li> <li>• Federal Department of Town and Country Planning (PLAN)</li> </ul>	<ul style="list-style-type: none"> <li>• Perak State Forestry Department</li> <li>• Perak State Wildlife Department</li> </ul>
<b>REPORTING MECHANISM / TOOL</b>	
<ul style="list-style-type: none"> <li>• Updated maps</li> <li>• Field report</li> </ul>	<ul style="list-style-type: none"> <li>• Annual report</li> <li>• CFS Masterplan</li> </ul>

2. Promoting Linkages with the Central Forest Spine (CFS) Initiative and enhance protection of environmentally sensitive areas (ESA/KSAS)

<b>ACTION PLAN</b>	
<ul style="list-style-type: none"> <li>• Document issues in UKB relevant to CFS</li> <li>• Provide input to CFS masterplan (CFS Perak management plan –FRIM) review process</li> </ul>	<ul style="list-style-type: none"> <li>• Wildlife management plan (addressing human wildlife conflicts)</li> <li>• Adopt <i>Garis Panduan Pengurusan KSAS</i> dan <i>Garis Panduan Tanah Tinggi</i></li> <li>• Determine flora and fauna diversity</li> </ul>
<b>KPI</b>	
<ul style="list-style-type: none"> <li>• Inclusion of UKB within CFS as linkage</li> </ul>	<ul style="list-style-type: none"> <li>• Provision of ESA Class for UKB</li> </ul>
<b>MONITORING METHODS</b>	
<ul style="list-style-type: none"> <li>• CFS report</li> </ul>	<ul style="list-style-type: none"> <li>• Satellite Survey</li> <li>• Maps</li> </ul>
<b>LEADING STAKEHOLDERS</b>	
<ul style="list-style-type: none"> <li>• Perak State Exco on Health, Science, Environment and Green Technology</li> <li>• Federal Department of Town and Country Planning (PLAN)</li> </ul>	<ul style="list-style-type: none"> <li>• Perak State Forestry Department</li> <li>• Perak State Wildlife Department</li> </ul>
<b>REPORTING MECHANISM / TOOL</b>	
<ul style="list-style-type: none"> <li>• CFS Masterplan</li> </ul>	

### 3. Promoting Sustainable Eco-tourism in Upstream UKB

#### **ACTION PLAN**

- Undertake assessment of potential ecotourism options in UKB
- Improve facilities for ecotourism including trails, rest spots, camping sites or homestays
- Train and certify orang asli/local people to be local guides and require use of local guides for trekking
- Promotion to tour operators and public
- Ask visitors to document their visits and share observations in designated platform esp social media
- Local product development

#### **KPI**

- Percentage of involvement of Orang Asli in Mount Korbu tourism
- Number of Orang Asli benefiting directly esp. generating alternative income

#### **MONITORING METHODS**

- Log/Record book
- Survey

#### **LEADING STAKEHOLDERS**

- Perak State Forestry Department
- Ministry of Tourism, Arts and Culture Malaysia (MOTAC)
- Department of Orang Asli Development (JAKOA)

#### **REPORTING MECHANISM / TOOL**

- Report
- Committee meetings

### 4. Promoting Forest Stewardship by Orang Asli Communities and local communities

#### **ACTION PLAN**

- Development of a network of Orang Asli Rangers or Friends of UKB as an early warning system against illegal forest encroachment, resource extraction, pollution events, etc.
- Training for community rangers
- Provision of basic equipment
- Develop "Community Conservation Area" CCA
- Appoint OA as "assistant" forest ranger

#### **KPI**

- Number of Training to empower the communities
- Numbers of OA/local community forest stewardess

#### **MONITORING METHODS**

- Stakeholders record
- Forest monitoring
- Field survey

#### **LEADING STAKEHOLDERS**

- Perak State Forestry Department

**REPORTING MECHANISM / TOOL**

- Training report
- Reporting to agencies
- Web portal
- Mobile application

**5. Rehabilitation of degraded forest and riverine areas****ACTION PLAN**

- Identification of priority degraded forest and riverine habitats in catchment.
- Selection of sites, species and techniques for active rehabilitation
- Establish trial rehabilitation sites with engagement of local orang asli communities
- Scale up rehabilitation measures
- Monitor and maintain rehabilitated sites

**KPI**

- Percentage of rehabilitated degraded forest areas
- Percentage of rehabilitated degraded riverine areas

**MONITORING METHODS**

- Field survey
- Rehabilitation activity monitoring

**LEADING STAKEHOLDERS**

- Perak State Forestry Department
- Department of Wildlife and national parks
- Department of Irrigation and Drainage (DID) Perak

**REPORTING MECHANISM / TOOL**

- Report
- Improvement assessment
- Audit

**6. Support sustainable development of Kinta Geopark****ACTION PLAN**

- Assessment and masterplan development
- Development/repair of trails and access points
- Development of brochures and promotional materials
- Further monitoring and assessment through expeditions

**KPI**

- Number of activities carried out annually relating to Kinta Geopark

**MONITORING METHODS**

- Activity monitoring
- Participation of stakeholders in activities

### LEADING STAKEHOLDERS

- Perak State Exco on Health, Science, Environment and Green Technology
- Perak State Parks Corporation

### REPORTING MECHANISM / TOOL

- Report

## 7. Mainstreaming biodiversity into river management

### ACTION PLAN

- Wildlife surveys
- Botanical surveys
- Identification of conservation issues
- Map geology features (GeoPark)
- Assess historical and cultural features
- Identify and map human wildlife conflict areas

## Goal 2: To protect and improve rivers and water resources in UKB

### OBJECTIVES

1. To conserve streams, rivers and other water bodies in the upstream of the Upper Kinta Basin (UKB)
2. To enhance water quality in the Sultan Azlan Shah Reservoir and maintain and enhance long term water supply for Ipoh City and adjacent areas.

### STRATEGIES

#### 1. Assess and quantify the Pollutant Sources in UKB

##### ACTION PLAN

- Mapping of eroding slopes and categorization according to severity of erosion and possible mitigation measures.
- Review effectiveness of current erosion control measures.
- Establishment of monitoring programme on slope erosion and landslides.
- Assess silt loading of rivers and streams downstream of eroding slopes
- Conduct risk assessment

##### KPI

- Number of monitoring by communities
- Annual pollution source inventory in UKB by agencies

##### MONITORING METHODS

- Pollution monitoring
- Field survey

**LEADING STAKEHOLDERS**

- Department of Environment (DOE) Malaysia
- Department of Irrigation and Drainage (DID) Perak
- Perak State Forestry Department

**REPORTING MECHANISM / TOOL**

- Centralized web portal
- Centralized mobile application

**2. Undertake immediate measures to address slope erosion along highway****ACTION PLAN**

- Design and implement erosion control measures on the slopes below the highway to reduce siltation to the rivers and reservoir.
- Public Work Department of (PWD) Perak to request erosion mitigation design from Federal PWD.
- Establish pilot plots for bio-engineering approach and PWD to monitor together.
- Establish Slope Watch Program run by Orang Asli (OA) and public who monitor slopes especially on Simpang Pulai Highway stretch for signs of landslides and report to authorities, conduct simple maintenance of slopes, such as clearing of overgrowth in drains.
- Initiate community based bio-engineering activities as part of immediate mitigation like bamboo planting:
  - (a) Help community especially OS to setup nursery
  - (b) Plant bamboo and other species to stabilise erosion prone slopes.

**KPI**

- Checklist on slope risk categories along the highway
- Number of hard-engineering measures to address slope erosion
- Number of bio-engineering measures to address slope erosion

**MONITORING METHODS**

- Impact monitoring
- Slope survey & monitoring
- Biodiversity survey & monitoring

**LEADING STAKEHOLDERS**

- Perak State Exco on Health, Science, Environment and Green Technology
- Slope Engineering Division, Public Works Department (JKR)
- Department of Irrigation and Drainage (DID) Perak
- Department of Environment (DOE) Malaysia
- Perak Water Board

**REPORTING MECHANISM / TOOL**

- Web portal
- Citizen science reporting
- Annual report



### 3. Enhance siltation control and desilting measures at Sultan Azlan Shah Reservoir

#### **ACTION PLAN**

- Assess experience and lessons learned from current silt traps at reservoir and take measures to enhance their effectiveness and operation and maintenance.
- Introduce silt curtains and other measures to reduce likelihood of silt reaching the reservoir.
- Assess potential options to establish silt traps closer to the eroding slopes.
- Undertake additional measures in line with assessments

#### **KPI**

- Annual rate of reduction in siltation

#### **MONITORING METHODS**

- Sediment trap monitoring
- Check dam monitoring
- Water quality monitoring (Biological & Physicochemical)

#### **LEADING STAKEHOLDERS**

- Department of Irrigation and Drainage (DID) Perak
- Department of Environment (DOE) Malaysia
- Perak Water Board

#### **REPORTING MECHANISM / TOOL**

- Reports
- Audit
- Citizen science reporting

### 4. Review and upgrade as necessary the water treatment system at Sultan Azlan Shah Reservoir

#### **ACTION PLAN**

- Review operation and effectiveness of the water treatment plant
- Identify and implement enhancements as needed to ensure long term and sustainable water supply.

#### **KPI**

- Percentage of compliance of water quality to drinking water quality standards
- Ability of supply potable water as per demand

#### **MONITORING METHODS**

- Public feedback/ complaints
- Log book record on water supply disruption
- Field survey

#### **LEADING STAKEHOLDERS**

- Perak Water Board
- National Water Service Commission (SPAN)

#### **REPORTING MECHANISM / TOOL**

- LAS report
- Web portal
- Mobile application

## 5. Improve water quality and recreation sites downstream of the Dam

### ACTION PLAN

- Ulu Kinta water catchment area reviewed again and regazetted
- Conduct rapid assessment on nature and use of recreation sites downstream of the Sultan Azlan Shah Dam
- Recommend actions to enhance and rehabilitate the sites
- Implement measures to rehabilitate the sites together with local stakeholders.
- Strengthen laws on river buffer zones

### KPI

- Water quality target setting based on beneficial usage for recreation site
- Number of beneficiaries from recreational sites at downstream

### MONITORING METHODS

- Public participation
- Fishing activity monitoring
- Recreation activity monitoring

### LEADING STAKEHOLDERS

- Department of Irrigation and Drainage (DID) Perak
- Perak State Forestry Department

### REPORTING MECHANISM / TOOL

- Report
- Committee meetings

## 6. Enhance Monitoring of Water Quality and flow in UKB

### ACTION PLAN

- Establish real-time water monitoring station at strategic location upstream and downstream from the reservoir and within the reservoir.
- Continuous monitoring of intake and treated water quality for water treatment plant
- Sharing of monitoring data among relevant/respective agencies
- Sharing data on intake water quality and treated water quality with public as part of Public Outreach Programme

### KPI

- Frequency of water quality and flow monitoring
- Improved water quality within UKB

### MONITORING METHODS

- Water quality monitoring
- River Hydrology study
- Rainfall monitoring
- DID's Automatic Monitoring stations

### LEADING STAKEHOLDERS

- Department of Irrigation and Drainage (DID) Perak
- Department of Environment (DOE)

### REPORTING MECHANISM / TOOL

- Environmental Quality Report
- Citizen science reporting

7. Undertake an outreach programme to UKB water consumers to inform them of the importance of protection/monitoring of UKB for water supply

<b>ACTION PLAN</b>	
<ul style="list-style-type: none"> <li>Develop outreach campaign on UKB water resources and supply in partnership with relevant stakeholders</li> <li>Develop and promote to consumers their river address that emphasizes on the river, water intake and treatment plant connectivity</li> </ul>	<ul style="list-style-type: none"> <li>Include information on water bills related to water source and river address</li> <li>Conduct pre-post public outreach programme study related to water source during any programmes</li> </ul>
<b>KPI</b>	
<ul style="list-style-type: none"> <li>Number of outreach programmes carried out annually</li> </ul>	<ul style="list-style-type: none"> <li>Number of initiatives carried out annually by targeted groups</li> </ul>
<b>MONITORING METHODS</b>	
<ul style="list-style-type: none"> <li>Consultation</li> <li>Trainings/workshops</li> </ul>	<ul style="list-style-type: none"> <li>Roadshows</li> <li>Initiatives</li> </ul>
<b>LEADING STAKEHOLDERS</b>	
<ul style="list-style-type: none"> <li>Perak State Exco on Health, Science, Environment and Green Technology</li> <li>Perak Water Board</li> </ul>	<ul style="list-style-type: none"> <li>Department of Irrigation and Drainage (DID) Perak</li> <li>Department of Environment (DOE)</li> </ul>
<b>REPORTING MECHANISM / TOOL</b>	
<ul style="list-style-type: none"> <li>Report</li> <li>Survey</li> </ul>	<ul style="list-style-type: none"> <li>Committee meetings</li> </ul>

## Goal 3: To enhance sustainable livelihood and welfare of Orang Asli communities in the Upper Kinta Basin (UKB)

### OBJECTIVES

- To empower the Orang Asli (OA) on the sustainable alternative livelihood
- To enhance the welfare of OA community as part of UKB Management Plan

### STRATEGIES

- Develop Alternative Sustainable Livelihoods for Orang Asli Communities in UKB

<b>ACTION PLAN</b>		
<ul style="list-style-type: none"> <li>Eco-tourism</li> <li>Eco-trails construction</li> <li>Honey bee farming and production</li> </ul>	<ul style="list-style-type: none"> <li>Natural fish spa</li> <li>Forest resource based nature craft products</li> </ul>	<ul style="list-style-type: none"> <li>OA as tour guides</li> <li>Outdoor recreational space creation</li> </ul>

<b>KPI</b>	
<ul style="list-style-type: none"> <li>Number of alternative livelihoods developed</li> </ul>	<ul style="list-style-type: none"> <li>Number of Orang Asli benefitting from alternative sustainable livelihood</li> </ul>
<b>MONITORING METHODS</b>	
<ul style="list-style-type: none"> <li>Demographic survey</li> </ul>	<ul style="list-style-type: none"> <li>Initiative report</li> </ul>
<b>LEADING STAKEHOLDERS</b>	
<ul style="list-style-type: none"> <li>Department of Orang Asli Development (JAKOA)</li> </ul>	<ul style="list-style-type: none"> <li>Ministry of Tourism, Arts and Culture Malaysia (MOTAC)</li> </ul>
<b>REPORTING MECHANISM / TOOL</b>	
<ul style="list-style-type: none"> <li>Report</li> </ul>	

## 2. Enhance safe water supply and sanitation for Orang Asli Communities in UKB

<b>ACTION PLAN</b>		
<ul style="list-style-type: none"> <li>Forest Monitoring Training</li> </ul>	<ul style="list-style-type: none"> <li>Water and river water quality monitoring</li> </ul>	<ul style="list-style-type: none"> <li>Sanitation management</li> </ul>
<b>KPI</b>		
<ul style="list-style-type: none"> <li>Percentage of clean (improved) water supply for Orang Asli</li> </ul>	<ul style="list-style-type: none"> <li>Percentage of improved sanitation for Orang Asli</li> </ul>	
<b>MONITORING METHODS</b>		
<ul style="list-style-type: none"> <li>Field survey</li> </ul>	<ul style="list-style-type: none"> <li>Infrastructure support</li> </ul>	<ul style="list-style-type: none"> <li>Beneficiaries' inventory</li> </ul>
<b>LEADING STAKEHOLDERS</b>		
<ul style="list-style-type: none"> <li>Department of Orang Asli Development (JAKOA)</li> <li>Perak Water Board</li> </ul>	<ul style="list-style-type: none"> <li>Northern Regional Water Service Commission (SPAN)</li> <li>Perak State Health Department</li> </ul>	
<b>REPORTING MECHANISM / TOOL</b>		
<ul style="list-style-type: none"> <li>Compliance report</li> </ul>	<ul style="list-style-type: none"> <li>Environmental Quality Report</li> </ul>	<ul style="list-style-type: none"> <li>Audit</li> </ul>

## 3. Enhance welfare for Orang Asli communities in UKB

<b>ACTION PLAN</b>	
<ul style="list-style-type: none"> <li>Empowerment and education programs</li> <li>Health and Environmental Monitoring</li> </ul>	<ul style="list-style-type: none"> <li>Infrastructure support</li> </ul>
<b>KPI</b>	
<ul style="list-style-type: none"> <li>Number of welfare initiatives</li> </ul>	<ul style="list-style-type: none"> <li>Percentage of improved welfare for Orang Asli</li> </ul>

<b>MONITORING METHODS</b>	
• Field survey	• Infrastructure support • Beneficiaries' inventory
<b>LEADING STAKEHOLDERS</b>	
• Department of Orang Asli Development (JAKOA)	
<b>REPORTING MECHANISM / TOOL</b>	
• Report	• Audit

4. Enhance promotion and marketing of Products from orang Asli Communities in UKB

<b>ACTION PLAN</b>	
• Establish business opportunities / hubs to promote and market Orang Asli products	• Creating the best business models and mechanisms. • Promote as a tourism product
<b>KPI</b>	
• Number of promotion/marketing products	• Number of Orang Asli benefitting from marketing & selling
<b>MONITORING METHODS</b>	
• Demographics survey	• Beneficiaries' inventory
<b>LEADING STAKEHOLDERS</b>	
• Department of Orang Asli Development (JAKOA)	• Ministry of Tourism, Arts and Culture Malaysia (MOTAC)
<b>REPORTING MECHANISM / TOOL</b>	
• Report	• Audit

## Goal 4: To enhance multi-stakeholder coordination & management

### OBJECTIVES

1. To setup the multi-agency coordination and sustainable mechanism of stakeholder participation
2. To ensure the UKB MaS as way forward and adopted and accepted by all stakeholders.

### STRATEGIES

1. Implement Effective Inter-Agency Coordination for Sustainable Management of UKB

#### ACTION PLAN

- Establish UKB Integrated Catchment Management (ICM) committee. The committee should be consists of both state and federal agencies as well the local authorities. Besides government agencies, selected private players and NGOS should be included to have check and balance system. The committee is proposed to be headed by the Menteri Besar or State Secretary of Perak:
  - (a) Effective mechanism for inter-agency coordination need to set up. This includes status update meeting, reporting through common platform (website and other digital platform) and monthly/quarterly review.
  - (b) Enhance existing/newly established State level environment committee chaired by Perak MB
  - (c) Invite other stakeholder like private stakeholders and communities to be part of committee
  - (d) Appoint special committee/taskforce in each government agencies for them to be trained first and to replicate planned initiatives within their respective departments

#### KPI

- Establishment of state level environmental protection and monitoring committee
- Number of environmental related stakeholders in committee

#### MONITORING METHODS

- Committee meetings
- Activity updates

#### LEADING STAKEHOLDERS

- Perak State Exco on Health, Science, Environment and Green Technology

#### REPORTING MECHANISM / TOOL

- Meeting report
- UKB MaS adoption reporting

## 2. Building Effective Mechanisms for Stakeholder Participation

### ACTION PLAN

- Establish or strengthen existing river basin stakeholder coalitions in the UKB consisting of organizations or individuals who are interested in the well-being of the respective river sub-basins in UKB:
  - (a) Identify key problems or required actions in the sub-basin and provide input to basin committees
  - (b) Support the government in the implementation of plans and programmes for each river sub-basin
  - (c) Establish community or stakeholder-based river monitoring activities
  - (d) Monitor and provide assessments of activities implemented
- (e) Ensure the dissemination of relevant information among members, the general public and private sector, and NGOs
- (f) Create better awareness and mutual understanding
- (g) Ensure that the interest of all stakeholders are adequately represented
- (h) Develop consensus on issues and actions to be taken
- Carry out activities more towards interactive, recreation and fun learning. River protection, monitoring, clean up, restoration and educational games are some of the interesting learning activities can be planned and implemented.

### KPI

- Effective Mechanism developed and used
- Number of stakeholders implementing UKBMaS

### MONITORING METHODS

- Activity monitoring
- Initiatives monitoring

### LEADING STAKEHOLDERS

- Perak State Exco on Health, Science, Environment and Green Technology
- All the agencies

### REPORTING MECHANISM / TOOL

- Committee meeting
- Centralized web portal for UKBMaS

### 3. Promote effective Outreach, Monitoring and Reporting (OMR) Mechanisms

#### **ACTION PLAN**

- Agencies to have common reporting mechanism for UKB. Existing reporting mechanism by agencies combined together under one framework so that all relevant stakeholders can take decision based on holistic data, not a single data.
- State level reporting mechanism (web/mobile application)
- Establish sub-committee for issues identification and reporting. These reports to be compiled and discussed at higher level meeting (e.g. state environment exco committee)
- Use alternative effective reporting mechanism by stakeholders. Reporting mechanism using stakeholder's especially local communities will ease the problem of immediate/real-time identification of issues. Reporting mechanism can be linked both local communities and stakeholders especially agencies.
- Visibility – community and public as well as tourists need to be exposed on the issues, status, and action and reporting mechanism.

#### **KPI**

- % of monitoring activities carried out under UKBMaS
- % of issues reporting by target groups
- Rate of feedback

#### **MONITORING METHODS**

- Pollution reporting
- Complaints
- Feedback mechanism

#### **LEADING STAKEHOLDERS**

- Perak State Exco on Health, Science, Environment and Green Technology
- All the agencies

#### **REPORTING MECHANISM / TOOL**

- Committee meeting
- Citizen Eye mobile application



#### 4. Promote the inclusion of UKBMaS in future local planning decision-making

##### **ACTION PLAN**

- Promote UKBMaS for adoption by stakeholders. Stakeholders' inputs need to be taken in account and further revision need to be carried out for successful implementation by relevant agencies.
- Develop promotional materials in multi languages to cater the need on local stakeholders including the tourists
- Road show for UKBMaS to be made public so that everyone including public know the plan which can infuse their individual actions. A lot of plans and strategies kept most of the time within government circles only, making difficult access for private and public as well as NGOs to initiate any conservation action.
- Promote the inclusion of UKBMaS in future revisions of
  - (a) National Physical plan
  - (b) Kinta District local plan
  - (c) Rancangan Tempatan Majlis Bandaraya Ipoh 2030
  - (d) CFS Master Plan
  - (e) Perak Structure Plan
  - (f) Perak Forest management plan
  - (g) Peak Water Board Business plan
- Enhance classification of UKB as Environmentally Sensitive Area
- Submit report on issues to National Water Council

##### **KPI**

- Number of UKB action/strategies adopted in local/state plan

##### **MONITORING METHODS**

- Strategy
- Initiatives monitoring

##### **LEADING STAKEHOLDERS**

- Perak State Exco on Health, Science, Environment and Green Technology
- PLAN Perak
- All the agencies

##### **REPORTING MECHANISM / TOOL**

- Local town plan
- State plan
- Committee meeting

## 5. Establish a financing mechanism for UKBMaS

### ACTION PLAN

- Identify the resource needed to implement the strategy
- Identify potential funding sources including government, private sector and other including international funders
- Incorporate funding into requests from Malaysia plan
  - (a) Funding from both federal and state
- Establish user pay schemes such as allocating portion of water tariffs or Payment for Ecosystem Services (PES).
  - (a) Infuse in water bills and tariff increase based on usage (domestic, commercial and industrial)
  - (b) Fixed amount (no percentage)
- Establish polluter pay schemes – such as charge to relevant agency or road users for cost of erosion control

### KPI

- Establishment Sustainable financing options for UKBMaS

### MONITORING METHODS

- Monetary benefits
- CapEx & OpeX

### LEADING STAKEHOLDERS

- Perak State Exco on Health, Science, Environment and Green Technology
- Perak State Economy Planning Unit

### REPORTING MECHANISM / TOOL

- State budget committee
- Audit
- Financial reporting meetings

**Contact Details:**

Global Environment Centre,  
2nd Floor, Wisma Hing, No. 78, Jalan SS2/72,  
47300 Petaling Jaya, Selangor, Malaysia

T: +603 7957 2007

F: +603 7957 7003

W: [www.gec.org.my](http://www.gec.org.my)

E: [outreach@gec.org.my](mailto:outreach@gec.org.my)