



NATIONAL WATER RESOURCES POLICY IMPLEMENTATION - Status Update

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Outline of Presentation

- **Introduction**
 - ✓ Background of NWRP
 - ✓ Approach & Philosophy
 - ✓ Policy Statement
 - ✓ Objectives
 - ✓ Key Core Area
- **Mechanism of Implementing NWRP**
- **Action Plans for 2014-2015**
- **Roles of NWRP in Integrated Water Resources Management Implementation**
- **Constraint for Successful NWRP Implementation**
- **Conclusion**



National Water Resources Policy (NWRP)



- Draft NWRP prepared under the *'Review of the National Water Resources Study (2000-2050) and Formulation of National Water Resources Policy'*, 2011;
- Draft NWRP reviewed by 4-Member Panel of Experts appointed as third party reviewer, 2011
- National Water Resources Council Meeting (**MSAN**) 6th held on 6 October 2011 accepted the NWRP;
- The policy was approved by the Cabinet on the **22nd Feb 2012**;
- NWRP launched by the Minister of NRE on the **24rd March 2012**.





Launching of NWRP



**Launching by:
YB Dato'Sri Douglas Uggah Embas
Menteri Sumber Asli dan Alam Sekitar
24 Mac 2012
Parit Buntar, Perak**





Approach & Philosophy

- NWRP embraces a complementary stand to other existing national policies related to water resources;
- In all, **17 national policies related to water resources under 9 ministries**, are referred;
- It looks at **existing legal provisions** and **institutional mandates** and **provide policy direction** for Integrated Water Resources Management (**IWRM**);
- It recognises the resources ownership, multitude of stakeholders and potential roles of all stakeholders for effective governance



Approach & Philosophy...(Cont..)

- It attempts to consolidate measures and mechanisms for effective and efficient water resources management ;
- It envisages to provide guidance to address knowledge gaps and strengthened methods and practices in IWRM;
- The main thrust of the policy are toward ensuring national **water resources security** and **water resources sustainability** in view of changing environment (climate change impacts in particular), increasing demands and challenging expectations;



Complementing Existing Policy Direction

More than 50 national policies were reviewed but 17 were identified related to WR.

e.g. : *National Environment Policy*

National Biodiversity Policy 1998

National Food Safety Policy

National Policy on Climate Change

Ministries and Policies that have bearing on the National Water Resources Policy

| MINISTRY | POLICY |
|---|---|
| Ministry of Natural Resources and Environment | <ul style="list-style-type: none"> ✓ National Mineral Policy 2 ✓ National Forestry Policy 1978 ✓ National Biodiversity Policy 1998 ✓ National Environment Policy ✓ National Policy on Climate Change |
| Ministry of Education | <ul style="list-style-type: none"> ✓ National Education Policy |
| Ministry of Plantation Industries and Commodities | <ul style="list-style-type: none"> ✓ National Biofuel Policy 2006 ✓ National Timber Industry Policy |
| Ministry of Energy, Green Technology and Water | <ul style="list-style-type: none"> ✓ National Energy Policy ✓ National Green Technology Policy |
| Ministry of Science, Technology and Innovation | <ul style="list-style-type: none"> ✓ National Biotechnology Policy |
| Ministry of Tourism | <ul style="list-style-type: none"> ✓ National Tourism Policy |
| Ministry of Agriculture and Agro-Based Industry | <ul style="list-style-type: none"> ✓ National Agro Food Policy 2011-2020 ✓ Food Security Policy |
| Ministry of Health | <ul style="list-style-type: none"> ✓ National Food Safety Policy |
| Ministry of Housing and Local Government | <ul style="list-style-type: none"> ✓ National Solid Waste Management Policy ✓ National Physical Plan |



APPROACH & PHILOSOPHY...(Cont..)



NWRP Four Guiding Tenets are consistent with all other national policies that is ;

1. **Water for people** : all shall have access to safe, adequate and affordable water supply, hygiene and sanitation
2. **Water for food and rural development** : there shall be sufficient water to ensure national food security and to promote rural development
3. **Water for economic development** : there shall be enough water to spur and sustain economic growth for a high income economy country
4. **Water for the environment** : there shall be adequate protection for the water environment to preserve flow regime, biodiversity, cultural heritage along with protection of water hazards





Policy Statement

The security and sustainability of water resources shall be made a national priority **to ensure adequate and safe water** for all, through **sustainable use, conservation** and **effective management** of water resources enabled by a mechanism of **shared partnership** involving **all stakeholders**



5 NWRP objectives

To set out the direction and strategies

To provide means and measures to complement existing policy directions related to water resources

To provide a platform to strengthen water resources intelligence

To set out the means and measures for the adoption of water resources conservation plans

To build the capacity of all stakeholders for effective participation and collaboration in water resources governance



Water Resources Security

**4 Thrusts +
8 Targets + 14 Strategies +
30 Strategic Action Plans**

Water Resources Sustainability

**2 Thrusts + 6 Targets + 8
Strategies + 18 Strategic Action
Plans**

KEY CORE AREAS

Partnership

**2 Thrusts + 2 Targets + 3
Strategies + 13 Strategic
Action Plans**

Capacity Building and Awareness

**1 Thrusts + 2 Targets +
3 Strategies + 8
Strategic Action Plans**



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Mechanism of Implementing NWRP

- 69 strategic action plans need to be implemented to ensure water resources can be managed in a holistic manner in line with the principles of IWRM.
- Detailed strategic action plan have been provided to ensure the objectives outlined in the NWRP realized.
- The integrated involvement of agencies / departments are essential in line with their roles and responsibilities through their expertise and specific task.



Mechanism of Implementing NWRP

**SEVERAL WORKSHOPS
CARRIED OUT TO
PREPARE ACTION
PLANS OF NWRP
(2012-2013)**





NWRP IMPLEMENTATION MECHANISME

NWRP Monitoring & Coordination Committee

Chairman : Dato' Sri KSU NRE
Secretariat : BSASH, NRE

NWRP Implementation Working Group

Chairman : Datuk KP JPS
Secretariat : BSAH, JPS





WORKING GROUP (WG)

| NO | WORKING GROUP | LEADER | SECRETARIAT |
|----|--|--|---|
| 1 | GOVERNANS | BHGN. SUMBER AIR SALIRAN DAN HIDROLOGI, (BSASH)NRE | BSASH, NRE |
| 2 | WATER RESOURCES INFORMATION | JPS MALAYSIA | BHGN. KORPORAT, JPS MALAYSIA |
| 3 | RESEARCH & DEVELOPMENT | INSTITUT PENYEDLIDKAN DAN HIDRAULIK KEBANGSAAN MALAYSIA (NAHRIM) | NAHRIM |
| 4 | STANDARD & QUALITY | JABATAN ALAM SEKITAR (JAS) MALAYSIA | JAS |
| 5 | CAPACITY BUILDING AND AWARENESS | BHGN. SUMBER AIR SALIRAN DAN HIDROLOGI, (BSASH)NRE | BHGN. PENGURUSAN SUMBER AIR & HIDROLOGI, JPS MALAYSIA (BSAH, JPS) |



The objective of setting up these committees and working groups is to ensure that the goals, strategies and strategic action plans outlined in the NWRP can be effectively implemented to achieve specific targets.



Scope of work



1. Coordinate and monitor the implementation and monitoring the achievement of NWRP
2. Formulate implementation measures of NWRP
3. Receive feedback on issues related to improve the implementation and review NWRP from time to time
4. Establish task forces to assist the implementation of NWRP.



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STRATEGIC ACTION PLANS, NATIONAL WATER RESOURCES POLICY

WORKING GROUP 1 – GOVERNANS



| STRATEGI | PELAN TINDAKAN STRATEGIK | CADANGAN PELAKSANAAN | PERANCANGAN PELAKSANAAN 2014 / 2015 | TINDAKAN |
|---|---|---|--|--|
| Strategi 24 Membangun cara dan langkah rundingan | <p>PTS 52 Kenalpasti saluran-saluran jaringan komunikasi rasmi & tidak rasmi.</p> <p>PTS 53 Kenalpasti opsyen pengukuhan kolaborasi, perundingan & platform penglibatan pihak berkepentingan.</p> <p>PTS 54 Bangunkan proses rundingan di dalam pelan pembangunan tempatan sumber air, tindakan bersama & bersepadu berkaitan dengan penggunaan lestari serta pemuliharaan sumber air.</p> | <p>CP27</p> <ol style="list-style-type: none"> 1. Senaraikan cara/langkah rundingan saluran komunikasi antara pihak berkepentingan (negara, negeri & tempatan) 2. Kenalpasti opsyen-opsyen pengukuhan 3. Rangka program peringkat tempatan untuk gubal pelan pembangunan & pemuliharaan sumber air (lokasi, daerah atau sempadan hidrologi & hidrogeologi) serta laksana proses rundingan (bengkel/perbincangan kumpulan) | <ol style="list-style-type: none"> 1. Sesi Bersama NGO, 2 kali setahun (10/02/14 & Nov 2014) 2. Mesyuarat Majlis Sumber Air Negara (MSAN) Ke-9 – Ogos 2014 3. Penubuhan Pasukan Penasihat Teknikal untuk memberi bantuan teknikal kepada Kerajaan Negeri sekiranya berlaku kekurangan air. 4. Mesyuarat Majlis Sumber Air Negeri – sebelum MSAN 5. Pertemuan secara berkala dengan pihak berkepentingan di peringkat Negeri yang terlibat dengan aktiviti melibatkan air sekali setahun 6. Penetapan Sempadan Kawasan Tadahan Air dan penetapan kesesuaian kegunaan kawasan tadahan air tersebut. – Kaji Semula bagi tujuan pewartaan. | <p>NRE</p> <p>NRE & KeTTHA</p> <p>NRE, KeTTHA & UPEN</p> <p>UPEN & JPS Negeri</p> <p>UPEN & JPS Negeri</p> <p>UPEN & Egensi-agensi berkaitan</p> |

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STRATEGIC ACTION PLANS, NATIONAL WATER RESOURCES POLICY

WORKING GROUP 1 – GOVERNANS



| STRATEGI | PELAN TINDAKAN STRATEGIK | CADANGAN PELAKSANAAN | PERANCANGAN PELAKSANAAN 2014 / 2015 | TINDAKAN |
|---|--|--|--|--|
| Strategi 25 Menentukan cara, langkah dan pendekatan untuk tadbir urus (governans) kolaboratif | <u>PTS 55</u> Kenalpasti proses dan prosedur yang boleh diintegrasikan untuk memastikan perkongsian tadbir urus sumber air (governans sumber air adalah secara bersama) | <u>CP 30</u> i. Kaji semula proses & prosedur yang terpakai dalam governans sumber air secara menyeluruh (semakan mandat, bidangkuasa dan kuasa berlandaskan perundangan untuk melihat keterangkuman & skop cakupan berdasarkan keperluan yang dikenalpasti untuk mengurus tadbir sumber air) | 1. Sedia satu kerangka (kertas konsep) proses & prosedur perkongsian governans sumber air (November 2014) – Sg Merentasi Sempadan. | NRE |
| | <u>PTS 56</u> Kenalpasti opsyen untuk pembentukan perkongsian yang rasmi & tidak rasmi | ii. Kaji peluang untuk membentuk platform perkongsian peringkat negara, negeri dan tempatan berdasarkan profil pihak berkepentingan, proses dan prosedur governans sumber air untuk melihat hubungan perkongsian pihak berkepentingan | 2. Perbincangan penggunaan empangan untuk pelbagai fungsi dengan memasukkan fungsi tebatan banjir. - National Blue Ocean Strategy | NRE, MOA & KeTTHA |
| | <u>PTS 57</u> Kenalpasti saluran jaringan komunikasi rasmi & tidak rasmi | iii. Kaji semula pendekatan dan cara pelaksanaan pendekatan yang diterima pakai untuk diselaraskan sebagai satu kesatuan dalam pemuliharaan, penggunaan, pembangunan dan pengurusan sumber air secara lestari (jamin sumber air untuk masa kini & masa hadapan). | 3. Mengumpul perundangan dan dasar berkaitan sumber air dan bekalan air yang terkini di peringkat Persekutuan dan Negeri bagi memastikan sumber dan kepentingan air terpelihara. Cth Akta Air 1920, Enakmen Sungai dan Parit 1935 (Kelantan) dan Enakmen Sumber Air 2007 (Pahang) – bagi tujuan penyeragaman undang-undang | NRE & Jabatan Peguam Negara & PUU Negeri |
| | <u>PTS 58</u> Kaji semula & selaraskan prasyarat di dalam pendekatan yang digunapakai & diterima untuk pemuliharaan & pengurusan sumber air seperti IWRM, IRBM, IFM, ILM dsb. | | | |



STRATEGIC ACTION PLANS, NATIONAL WATER RESOURCES POLICY

WORKING GROUP 2 – WATER RESOURCES INFORMATION



| STRATEGI | PELAN TINDAKAN STRATEGIK | CADANGAN PELAKSANAAN | PERANCANGAN PELAKSANAAN 2014 / 2015 | TINDAKAN |
|---|--|---|--|--|
| <p><u>Strategi 1</u> Melaksanakan pengukuhan dan pengemaskinian data-data saintifik dan teknikal sedia ada secara berkala.</p> <p><u>Strategi 2</u> Mewujudkan sistem analisis dan sintesis data-data saintifik dan teknikal secara berterusan.</p> | <p><u>PTS 1</u> Mengenal pasti data-data saintifik dan teknikal sedia ada yang berkait dengan air, sumber air, penggunaan dan pengguna</p> | <p>Mewujudkan katalog terperinci maklumat sumber air dan pihak berkepentingan</p> | <p>Satu katalog disediakan pada 2014</p> | <p>1. Agensi berkaitan akan melengkapkan maklumat seperti lampiran 1 dan 2 pada 30 Mac 2014.</p> <p>2. Maklumat akan diselaraskan oleh JPS</p> |
| <p><u>Strategi 3</u> Membangun kerangka pangkalan data dan mewujudkan jaringan maklumat.</p> <p><u>Strategi 4</u> Mewujudkan kerangka komunikasi antara pihak berkepentingan utama.</p> | <p><u>PTS 6 & 8</u> Membangunkan sistem dan tatacara perkongsian, akses serta penyelenggaraan maklumat</p> | <p>1. Kaji semula sistem penyimpanan serta kerangka pangkalan data sedia ada, kenalpasti jurang, semak semula skop dan liputan.</p> <p>2. Pembangunan sistem.</p> | <p>Julai 2014 hingga 2016</p> | |



STRATEGIC ACTION PLANS, NATIONAL WATER RESOURCES POLICY

WORKING GROUP 3 – RESEARCH & DEVELOPMENT



| STRATEGI | PELAN TINDAKAN STRATEGIK | CADANGAN PELAKSANAAN | PERANCANGAN PELAKSANAAN 2014 / 2015 | TINDAKAN |
|---|--|--|--|--|
| <p>Mengenalpasti kajian yang diperlukan untuk menentukan tahap kerentanan (vulnerability) sumber air yang memberi tekanan, impak dan ancaman utama kepada sumber air secara komprehensif;</p> | <ol style="list-style-type: none"> Pelan Pengurusan Kawasan Tadahan (Catchment Management Plan) Pangkalan Data Kertas / Maklumat Penyelidikan – Gedung 1NAHRIM | <ol style="list-style-type: none"> Penilaian vulnerabiliti dan adaptasi bagi mengatasi impak perubahan iklim keatas sumber air; Penilaian vulnerabiliti keatas sumber air dibawah kesan kemajuan dan bentuk pembangunan, “pencerobohan” kawasan tadahan dan populasi penduduk; Kajian terperinci “water security (and water scarcity)” dan “water availability (surface water, groundwater, rainwater, lake etc)” R&D menggunakan kaedah Managed Aquifer Recharge (MAR) sebagai adaptasi kepada perubahan iklim Kajian lanjut ancaman kesan kenaikan aras laut - penerobosan air masin terhadap bekalan air di muara sungai serta pesisir pantai; Kajian “coastal flooding” diakibatkan kesan kenaikan aras laut | <ol style="list-style-type: none"> Projek penyelidikan pengagihan dan kerentanan bekalan air dibawah scenario perubahan iklim & “Pahang-Selangor Water Transfer” menggunakan aplikasi MIKE Basin di Lembangan Sungai Kelang, Selangor dan Langat (NAHRIM – peruntukan sediada RM200k, jangka siap Sept); Kajian impak peningkatan aras laut - Peta inandasi banjir di Batu Pahat dan Kelang (NAHRIM - peruntukan sediada RM200k, jangka siap Sept); Kerentanan sumber air akibat proses perbandaran dan perubahan iklim di Sungai Langat; Kajian pemantauan dan penilaian kuantiti dan kualiti air Sungai Kuncha dalam kawasan Hutan Simpan Piah di Perak (FRIM/JPSM – peruntukan sediada RM150k, jangka siap Dis) | <p>NAHRIM UNITEN FRIM/JPSM UPM</p> |

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STRATEGIC ACTION PLANS, NATIONAL WATER RESOURCES POLICY

WORKING GROUP 3 – RESEARCH & DEVELOPMENT



| STRATEGI | PELAN TINDAKAN STRATEGIK | CADANGAN PELAKSANAAN | PERANCANGAN PELAKSANAAN 2014 / 2015 | TINDAKAN |
|---|---|--|---|--|
| <p>Mengenalpasti kajian yang diperlukan untuk menentukan tahap kerentanan (vulnerability) sumber air yang memberi tekanan, impak dan ancaman utama kepada sumber air secara komprehensif;</p> | <p>1. Pelan Pengurusan Kawasan Tadahan (Catchment Management Plan)</p> <p>2. Pangkalan Data Kertas / Maklumat Penyelidikan – Gedung 1NAHRIM</p> | <p>6. Kajian “coastal flooding” diakibatkan kesan kenaikan aras laut</p> | <p>5. Penyelidikan keberkesanan kaedah Penyusupan Tebing untuk bekalan air domestik di Sungai Linggi, Negeri Sembilan</p> <p>6. Penyelidikan potensi penyusupan tebing di kawasan Sungai Muda, Kedah dan Pulau Pinang</p> <p>7. Penyelidikan kesan peningkatan aras laut terhadap akuifer pantai di Kuala Terengganu</p> <p>8. Prediction of Global Earth’s Climate System on Water: Case of Pulau Perhentian, Terengganu</p> | <p>NAHRIM UNITEN FRIM/JPSM UPM</p> |

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STRATEGIC ACTION PLANS, NATIONAL WATER RESOURCES POLICY

WORKING GROUP 3 – RESEARCH & DEVELOPMENT



| STRATEGI | PELAN TINDAKAN STRATEGIK | CADANGAN PELAKSANAAN | PERANCANGAN PELAKSANAAN 2014 / 2015 | TINDAKAN |
|---|--|---|---|--------------|
| Mengenalpasti keutamaan peluang penggunaan sumber air (termasuk punca alternatif dan opsyen penggunaan lain; | <ol style="list-style-type: none"><li data-bbox="320 425 643 835">1. Pelan Pengurusan Kawasan Tadahan (Catchment Management Plan)<li data-bbox="320 835 643 1406">2. Pangkalan Data Kertas / Maklumat Penyelidikan – Gedung 1NAHRIM | <ol style="list-style-type: none"><li data-bbox="643 425 1141 578">1. Kajian air larian banjir untuk imbuhan akuifer dan bekalan air sekunder<li data-bbox="643 578 1141 731">2. Kajian Waste(effluent) water untuk kegunaan non-potable<li data-bbox="643 731 1141 883">3. Polisi khusus menggunakan “treated effluent water “ & memperkenalkan insentif<li data-bbox="643 883 1141 1120">4. Memperkenalkan “Dual System” terutama industri atau kegunaan air yang tidak memerlukan air terawat<li data-bbox="643 1120 1141 1406">5. Insentif – menggunakan sumber air alternative | <ol style="list-style-type: none"><li data-bbox="1141 425 1736 664">1. Bio effluent re-use: Pre-treatment of Reverse Osmosis membrane using 2 stage fibre filter in series (IWK -peruntukan sediada);<li data-bbox="1141 664 1736 1406">2. Mengkaji keberkesanan prototaip sistem peranti solar bertingkat untuk ‘desalination of sea water’ untuk kegunaan domestik (air minuman) dan nelayan di laut (HTCKL – peruntukan sediada RM50k) | IWK HTCKL |



STRATEGIC ACTION PLANS, NATIONAL WATER RESOURCES POLICY

WORKING GROUP 4 – STANDARD & QUALITY



| STRATEGI | PELAN TINDAKAN STRATEGIK | CADANGAN PELAKSANAAN | PERANCANGAN PELAKSANAAN 2014 / 2015 | TINDAKAN |
|--|--|---|--|---|
| <u>Strategi 5</u> Memperkenalkan keseragaman dalam amalan berkaitan dengan penilaian dan analisis sumber air. | <u>PTS 9</u> Kaji semula dan bangunkan kriteria baru bagi penilaian analisis bentuk, status dan keadaan sumber air. | <u>CP 6</u> 1. Mengenalpasti amalan dan piawaian yang digunakan untuk analisa dan penilaian berkaitan sumber air bagi setiap Jabatan/Agensi 2. Cadangan penambahbaikan amalan & piawaian sediaada 3. Membangunkan kriteria dan standard yang baru. | 1. Cadangan standard water footprint SIRIM. 2. Penambahan parameter effluent air sungai. 3. Mewujudkan J/K Teknikal bagi standard air bawah tanah. | JAS (Pengerusi) Ahli : WG4 |
| <u>Strategi 6</u> Memperbaiki dan membangun langkah-langkah bagi menentukan nilai ambang dan perolehan sumber air dan integriti jasad sumber air. | <u>PTS 10</u> Profil kaedah dan langkah-langkah yang digunakan bagi menentukan nilai ambang dan perolehan. | 1. Mesyuarat WG4 & Pra-Mesyuarat WG4 seiring dengan Mesyuarat PPPDSAN. 2. Program/Kajian. <ul style="list-style-type: none"> • Permodelan kesan pencemaran punca tidak tetap (non-point sources) ke atas kualiti sumber air (i.e: L-THIA dll.) • Pembangunan kajian pilot Permodelan kesan pencemaran punca tidak tetap (non-point sources) ke atas kualiti sumber air oleh WG3 • Pembangunan 1 kajian pilot perlu menjadi sebahagian dari senarai pendek WG3 | Dilaksanakan sekurang-kurangnya 4 kali setahun. 2014 - 2015 | JAS (Pengerusi) Ahli WG4 NRE WG1 (Pengerusi) Ahli WG3 & WG4 |

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STRATEGIC ACTION PLANS, NATIONAL WATER RESOURCES POLICY

WORKING GROUP 4 – STANDARD & QUALITY



| STRATEGI | PELAN TINDAKAN STRATEGIK | CADANGAN PELAKSANAAN | PERANCANGAN PELAKSANAAN 2014 / 2015 | TINDAKAN |
|---|---|---|--|--|
| Strategi 6 Mengujudkan langkah-langkah terma, piawaian, dan garis panduan yang seragam. | <u>PTS 31</u> Menyeragamkan terma-terma bagi menentukan ciri-ciri sumber air. <u>PTS 32</u> Kaji semula profil dan selaras pelbagai piawaian berkaitan sumber air. | <ul style="list-style-type: none"> Pendekatan Total maximum Daily Load (TMDL) yang berkisar tentang carrying capacity sesuatu badan air. Kursus Awareness Pengenalan Pendekatan Total maximum Daily Load (TMDL) yang berkisar tentang carrying capacity sesuatu badan air. Satu (1) Kursus/Bengkel | September 2014 | JAS (Pengerusi) NAHRIM (Penceramah) Ahli WG4 |
| Strategi 21 Menentukan langkah-langkah untuk memastikan kebolehdapatan dan kualiti air semua jasad air. | <u>PTS 43</u> Utamakan penggunaan berasaskan pengklasifikasian berdasarkan keperluan dan kapasiti melalui pelan rumusan keutamaan mengikut masa. <u>PTS 44</u> Kenalpasti dan asingkan faktor tekanan sumber air termasuk penentuan kesan penggunaan tunggal dan pelbagai. | Program/Aktiviti 1 - Pembangunan Standard kualiti air tanah - Pengumpulan baseline data - Pengumpulan data Sepanjang tahun 2014 - Projek akan dilaksanakan dalam RMK 11 Program / Aktiviti Perkongsian Pintar antara semua ahli WG4 | Sepanjang tahun 2104 & 2015 2014 / 2015 | JAS (Pengerusi) Ahli WG4 |

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STRATEGIC ACTION PLANS, NATIONAL WATER RESOURCES POLICY

WORKING GROUP 4 – STANDARD & QUALITY



| STRATEGI | PELAN TINDAKAN STRATEGIK | CADANGAN PELAKSANAAN | PERANCANGAN PELAKSANAAN 2014 / 2015 | TINDAKAN |
|---|---|---|---|--------------------------------|
| Strategi 21 Menentukan langkah-langkah untuk memastikan kebolehdapatan dan kualiti air semua jasad air. | <p>PTS 45 Kenalpasti dan bangunkan langkah-langkah untuk menangani ancaman dari kontaminasi dan pencemaran dengan mengawal pencemaran dipunca, bukan dipunca seperti pencemaran yang merentasi sempadan.</p> <p>PTS 46 Optimumkan kadar abstraksi tanpa menjejaskan kelestarian sumber air.</p> <p>PTS 47 Menggabungkan aspek kualitatif dan kuantitatif air permukaan dan air bawah tanah dengan mengambil kira aliran semulajadi air dalam kitaran hidrologi untuk memastikan kadar pengambilan air tidak melebihi kadar imbuh semula.</p> | <p>Program/Aktiviti 1</p> <ul style="list-style-type: none">- Pembangunan Standard kualiti air tanah- Pengumpulan baseline data- Pengumpulan data <p>Sepanjang tahun 2014</p> <p>- Projek akan dilaksanakan dalam RMK 11</p> <p>Program / Aktiviti Perkongsian Pintar antara semua ahli WG4</p> | <p>Sepanjang tahun 2104 & 2015</p> <p>2014 / 2015</p> | <p>JAS (Pengerus) Ahli WG4</p> |



STRATEGIC ACTION PLANS, NATIONAL WATER RESOURCES POLICY

WORKING GROUP 5 – CAPACITY BUILDING AND AWARENESS



| STRATEGI | PELAN TINDAKAN STRATEGIK | CADANGAN PELAKSANAAN | PERANCANGAN PELAKSANAAN 2014 / 2015 | TINDAKAN |
|--|--|---|---|---|
| <p>Strategi 26 Mengenal pasti keperluan pembinaan keupayaan dan opsyen</p> | <p><u>PTS 62</u> Kenal pasti keperluan pembinaan keupayaan dan dipadankan kepada jenis skala dan permintaan</p> <p><u>PTS 64</u> Rangka program latihan dengan institusi pengajian tinggi, institusi latihan dan</p> | <ul style="list-style-type: none"> Review dokumentasi peningkatan kapasiti pengurusan sumber air yang telah diterbitkan Penganjuran sesi brain storming dan bengkel | <p>Rujukan dokumentasi bagi tujuan peningkatan kapasiti</p> <p>Penganjuran sesi “brain storming” dan bengkel</p> | <p>Ahli WG5 Bengkel – JPS BSAH</p> |
| <p>Strategi 27 Membangunkan program dan aktiviti bagi membantu pembinaan keupayaan termasuk kepakaran dan kemahiran</p> <p><i>continue..</i></p> | <p><u>PTS65</u> Rangka Program pendidikan latihan secara bersama dengan institusi pengajian tinggi tempatan, institusi latihan dan NGO</p> | <ul style="list-style-type: none"> Penganjuran 1 kursus IWRM di Institut pembangunan Modal Insan JPS Malaysia Penganjuran Kursus “Regional Water Footprint Course” melalui sumbangan dana UNESCO Jakarta Penganjuran “ToT Drought Management Course” melalui sumbangan dana CapNet 1 bengkel/kursus pengurusan air oleh Kumpulan Petani | <ul style="list-style-type: none"> Kursus IWRM- Mei 2014 Kursus Water Footprint – Sept 2014 Kursus Drought Management – Okt 2014 | <p>JPS Malaysia /MyWP</p> |



STRATEGIC ACTION PLANS, NATIONAL WATER RESOURCES POLICY

WORKING GROUP 5 – CAPACITY BUILDING AND AWARENESS



| STRATEGI | PELAN TINDAKAN STRATEGIK | CADANGAN PELAKSANAAN | PERANCANGAN PELAKSANAAN 2014 / 2015 | TINDAKAN |
|---|--|--|---|---|
| <p>Strategi 28 Memperkuatkan kefahaman dan kesedaran terhadap jaminan dan kelestarian sumber air</p> | <p>PTS 67 Kenal pasti platform untuk penglibatan media dan pihak berkepentingan secara efektif</p> <p>PTS 68 Rangka program atau aktiviti bersesuaian dengan kumpulan sasaran tertentu, situasi atau keperluan</p> <p>PTS 69 Wujudkan program pengiktirafan untuk individu dan entiti yang membantu mempromosi jaminan dan kelestarian sumber air</p> | <p>Platform yang dikenal pasti melalui perbincangan adalah seperti berikut :-</p> <ul style="list-style-type: none"> • Awareness and Training Camps • Media elektronik : pesanan radio, program TV dan papan iklan elektronik • Media cetak via posters (e.g. sekolah, jabatan dll) dan artikel • Media alternatif facebook, whatsapp application <p>Program Pelajar (Youth Program) /Guru</p> <ul style="list-style-type: none"> • 4 Kem pelajar (Water Resources/Environment Training Camps) • 3 Pesanan Radio (Radio Messages) & 3 Posters kesedaran • 1 program ToT <p>Penjawat Awam</p> <ul style="list-style-type: none"> • 3 Pesanan melalui stand bunting di JPS Negeri • 1 mesej Electronic billboard • 1 artikel dalam akhbar (Feature articles in print media) <p>Petani Wanita :</p> <ul style="list-style-type: none"> • 1 siaran dlm Agrotani (RTM) • 1 bengkel/kursus pengurusan air oleh Kumpulan Petani <p>Program Pengiktirafan Pelajar dan Guru :</p> <ul style="list-style-type: none"> • Pelajar dan Guru terbaik di Kem • Cadangan Pencetus Pengurusan Terbaik Sumber Air Negara • Anugerah Emas Thesis Sumber Air peringkat Sarjana, Master & PhD <p>Petani: Kumpulan Pengguna Air terbaik</p> | <p>Meeting and Engagement for Youth, Government and Public Program</p> <p>Farmers:</p> <ul style="list-style-type: none"> • Kem (Januari/May /Sept/Nov) • Pesanan Radio (Mac/Jun/ Sept) • Poster (Siap) • Program ToT – dlm perancangan • Pesanan Bunting – May • Mesej Elektronik - Jun • Artikel – July • Siaran TV – July, Oktober • Bengkel petani – September | <p>RTM, JPS, UNESCO-IHP, KPM, MOA, KBS, KKMM, MyWP, USM -</p> |

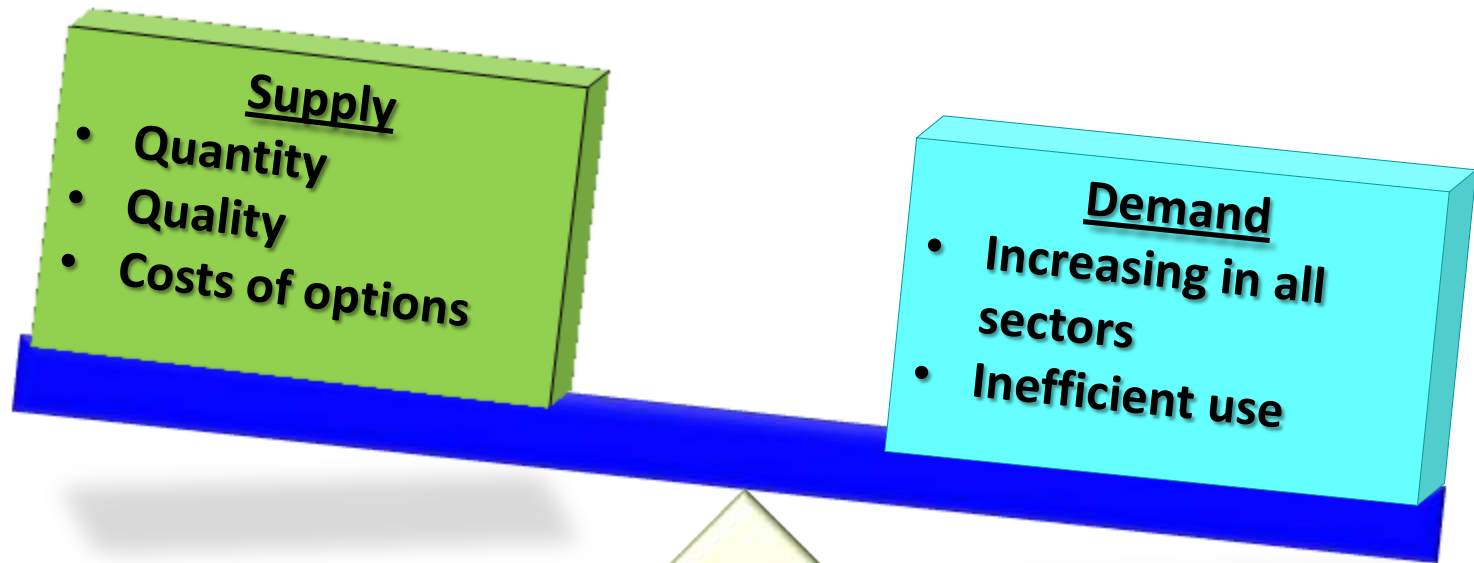


Outline of Presentation

- **Introduction**
 - ✓ Background of NWRP
 - ✓ Approach & Philosophy
 - ✓ Policy Statement
 - ✓ Objectives
 - ✓ Key Core Area
- **Mechanism of Implementing NWRP**
- **Action Plans for 2014-2015**
- **Roles of NWRP in Integrated Water Resources Management Implementation**
- **Constraint for Successful NWRP Implementation**
- **Conclusion**



WATER BALANCING ACT



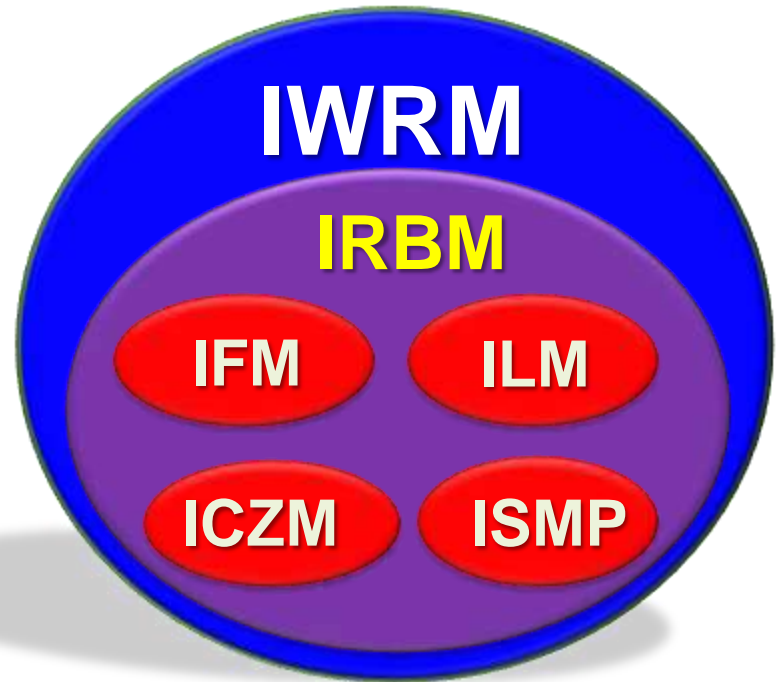
IWRM

A balance between conditions for sustainable development (national interest) and desirable socio-economic development (public interest) with ecological conditions (environmental integrity)



INTEGRATED APPROACHES

- ❑ Integrated Water Resources Management (IWRM)
- ❑ Integrated River Basin Management (IRBM)
- ❑ Integrated Lake Management (ILM)
- ❑ Integrated Coastal Zone Management (ICZM)
- ❑ Integrated Shoreline Management Plan (ISMP)
- ❑ Integrated Flood Management (IFM)



These approaches will help structure current practices towards better water resources management



IWRM Implementation

- **Clear Policy direction**
 - comprehensive water resources policy

- **Restrategies water management**
 - strengthened legal and institutional arrangements

- **Integration**
 - integration of natural and human systems
 - hard and soft measures
 - involves everybody



Examples of Strategic Action Plan In NWRP That Promote IWRM



i) Water Governance

- Develop a comprehensive water resources information system
- Strengthen database framework
- Establishment of mechanisms for formal and informal consultation on matters related to water resources
- Develop framework for stakeholder collaboration in water resources governance
- Build capacity of key water resources stakeholders
- Improve understanding and awareness of the importance of water resources security and sustainability

ii) Water Financing

- Determine Priority For Water Resources Use, Particularly In Times Of Crisis Or Threat
- Adopt Economic Measures To Value Water Resources



Examples of Strategic Action Plan In NWRP That Promote IWRM

iii) Environmental Aspects

- Set national standards to determine thresholds for water resources to protect their availability and integrity of water bodies

iv) Water Ecosystem

- Reduce vulnerability of water resources to impacts and threats as well as strengthen adaptability to ecosystems and physical changes.
- Adopt national criteria for water resources characterisation and standards

v) Flood Management

- Adopt a national disaster risk reduction, preparedness and response plan for water resources to introduce measures for preparedness and response, as well as reduction of risks and threats of disasters from and to water resources



Examples of Strategic Action Plan In NWRP That Promote IWRM



vi) Water Resources Availability

- Develop water resources conservation plans for strategic, sensitive and critical water resources areas and bodies
- Optimise options for alternative, conjunctive or contiguous use of different water resources types to reduce stress on existing sources
- Determine priority for water resources use, particularly in times of crisis or threat
- Adopt measures to implement water demand management nationwide

vii) Water Quality

- Adopt measures to determine optimum water quality and yield

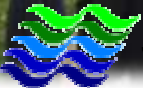


Awareness Programme





Community Programme





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Major Constraints For Successful NWRP / IWRM Implementation



1) Effectiveness of Existing Enabling Environment

- Water resources **planning**, **implementation** and **regulation** are **still sectoral driven**
- There are **many laws, regulatory and enactments** that govern water and land resources in the country.

IWRM and its Relations to Sub-sectors





Major Constraints For Successful NWRP / IWRM Implementation



2) Awareness of IWRM

- Despite various seminars, workshops and talks on IWRM by Government Agencies (JPS, ASM, NAHRIM, FRIM) and NGO's/society (MyWP, MyCapnet, GEC) and others to create awareness, **there are still lack of awareness of IWRM** countrywide.
- **The formal and informal processes of awareness programme** need to be further **strengthened.**





Major Constraints For Successful NWRP / IWRM Implementation

3) Lack of Capacity in Implementation (Public, Private and NGOs)



- **Capacity building and knowledge enhancement in IWRM is important** to enable policy makers, planners, and implementers to make informed and timely decision.
- **Inadequate expertise on IWRM** led to the lack of capacity in implementing agencies.
- **Need to carry out Training Need Analysis (TNA) and plan formal training programmes.**



Major Constraints For Successful NWRP / IWRM Implementation



4) Lack of Best Management Practices (BMPS) in IWRM

- At present, the government has initiated a number of measures to minimize and control environmental issues resulting from road construction and land development projects.

Eg: EIA, EMP and ESCP, Urban Stormwater Management Manual (MSMA)

- There are still lack of effective implementation of those guidelines and BMPs in common construction activities which impact waterways.

- This may be due to insufficient incentives in applying BMPs with related to IWRM.



Major Constraints For Successful NWRP / IWRM Implementation



5) Lack of Incentives in Improving Water Use Efficiency

- **Water pricing** (Domestic & Non-Domestic Water supplies) **does not reflect the actual cost of developing and providing the water supply.**
- There is **not enough incentives for water consumers** to use potable water and irrigation water efficiently.



Major Constraints For Successful NWRP / IWRM Implementation



6) Funding



- There are still **lack of funds for preventive measures** including capacity building, application of BPMs and R&D in the field of water resources.



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Conclusion

- Successful implementation of NWRP will benefit the people, the environment and the nation by ensuring water security and sustainability.
- Well managed water resources will serve as catalyst for social and economic development of the country.
- Full participation of all stakeholders (Federal and State Government Agencies, private sectors, NGOs and individuals) will ensure effective implementation of action plans under the NWRP.



THANK YOU

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