



Better Governance:

Inclusive Approach
through good practices
on water governance and IWRM

Water Resources Governance Initiative in Malaysia

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Better Governance:

Inclusive Approach through good practices

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Managing water resources as national agenda, today and tomorrow;

- *NWRC decision; river basins master plan,*
- *Review of National Water Resources Study,*
- *Adopting the National Water Resources Policy,*
- *Drafting the Water Resources Law,*
- *Strengthening and streamlining the institutional arrangement,*
- *Strengthening the internal capacity for maturity,*
- *Developing the Decision Support System,*
- *Consolidation and integration of water related project in development and investment (total solution).*



Overview of the issues

- *3000mm annual rainfall*
- *Too much water or too little water*
- *Facing water shortage during dry*
- *Facing flood during heavy rainfall*
- *5 states facing water scarcity*
- *Managing flood water to increase the availability*
- *Construct more water resources infrastructure*
- *Reduce flooded area and damages to public*
- *Consideration to review the basin structure plan; population distribution and development pattern*
- *Structural and non-structural measures*
- *Related research and development*
- *Public awareness and capacity development*
- *Review the existing legal provision, parameters and standard*

Problem solving initiative

FAST DIAGRAM – TOTAL SOLUTION BY INTEGRATED RIVER BASIN MANAGEMENT (IRBM)

FUNCTION ANALYSIS PHASE

HOW

WHY

Improve Quality of Life

Develop And Manage Sustainable Water Resources And Environment

- Ensure Sufficient Water
- Ensure Clean Water
- Reduce Flood Risk
- Enhance Environmental Conservation

Structure Measure

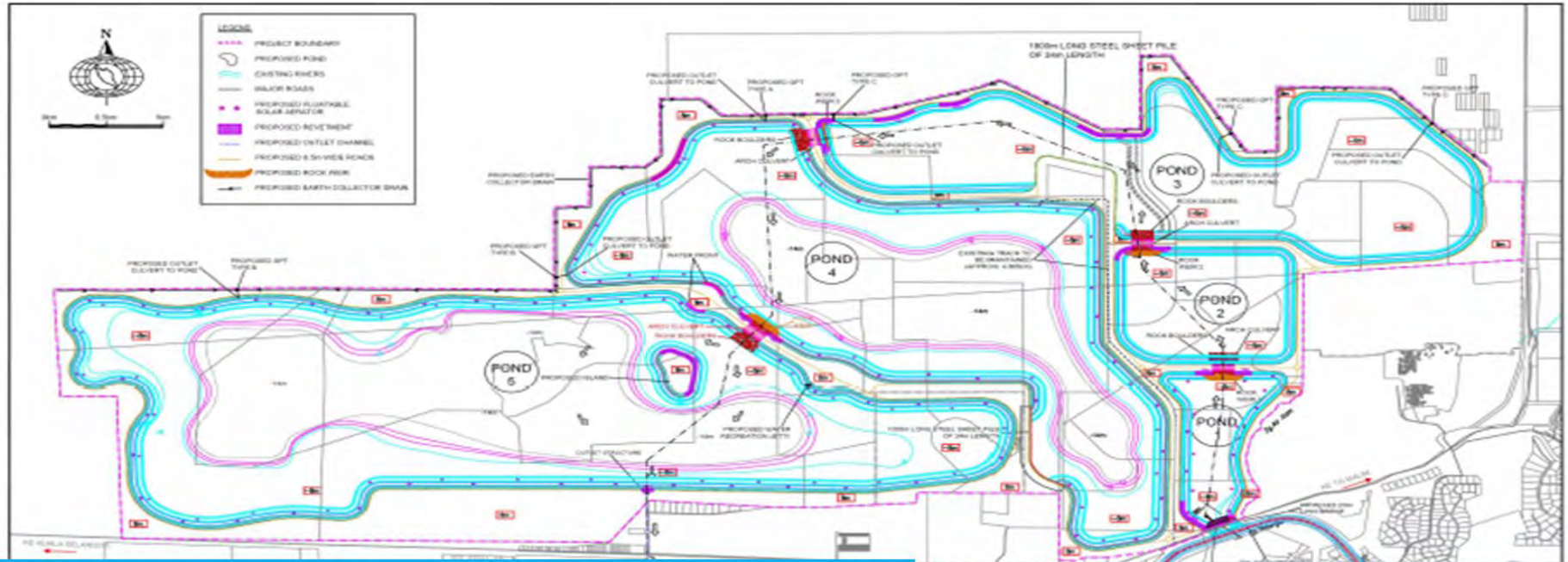
- Surface Run-Off Storage
- Water Transfer
- Remove Constriction
- Improve Drainage Systems
- Improve River System
- Improve River System Water Quality

Non Structural Measure

- Enforcement
- Monitoring
- Stakeholder Participation
- Outreach Programme

Implementation of Structural And Non-Structural Measure

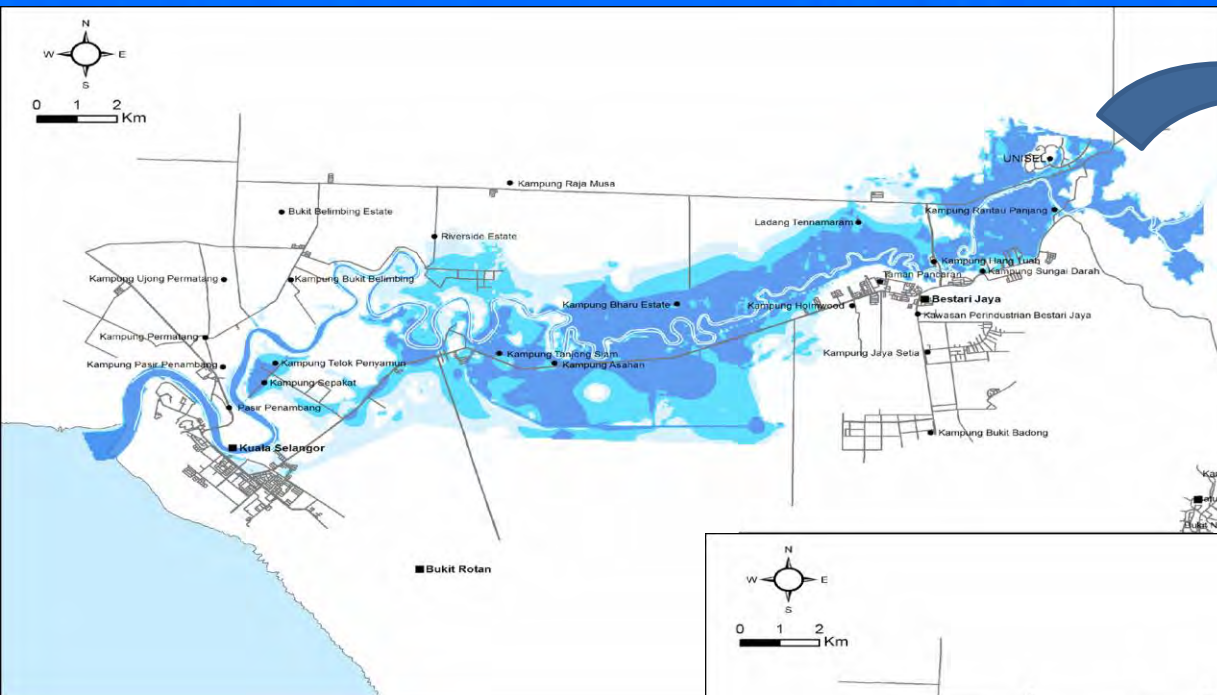
Problem solving initiative



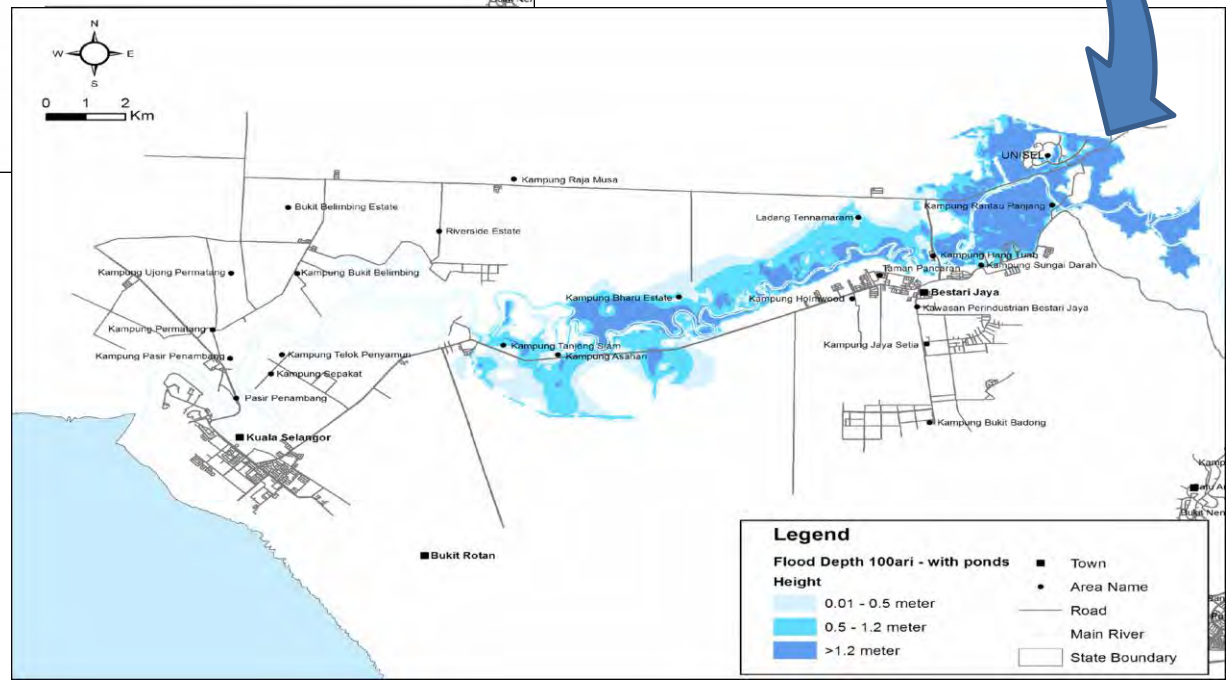
- Storage area 4,200 hectar.
- Storage construction by phases
- Water resources availability 3000 MLD
- Combination of surface and ground water
- Proposed Bandar Baru Bestari Jaya
- Bird migration route
- Environmental improvement



Problem solving initiative

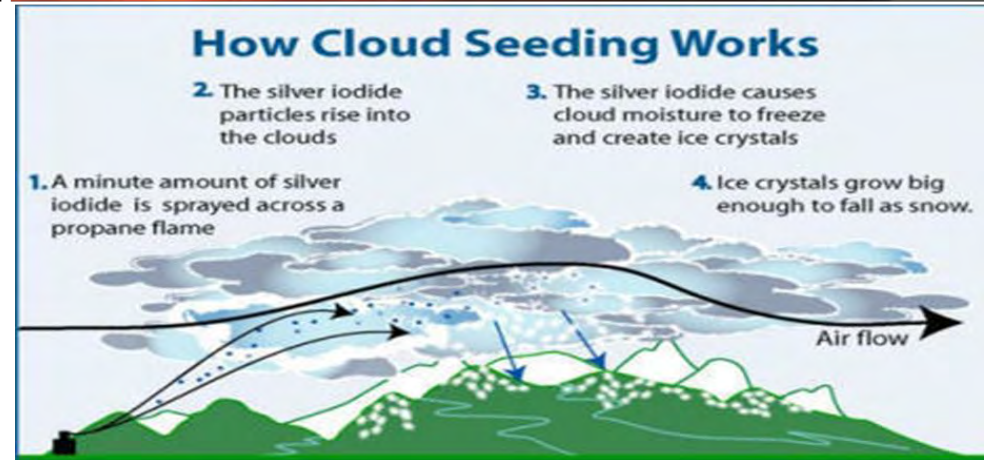
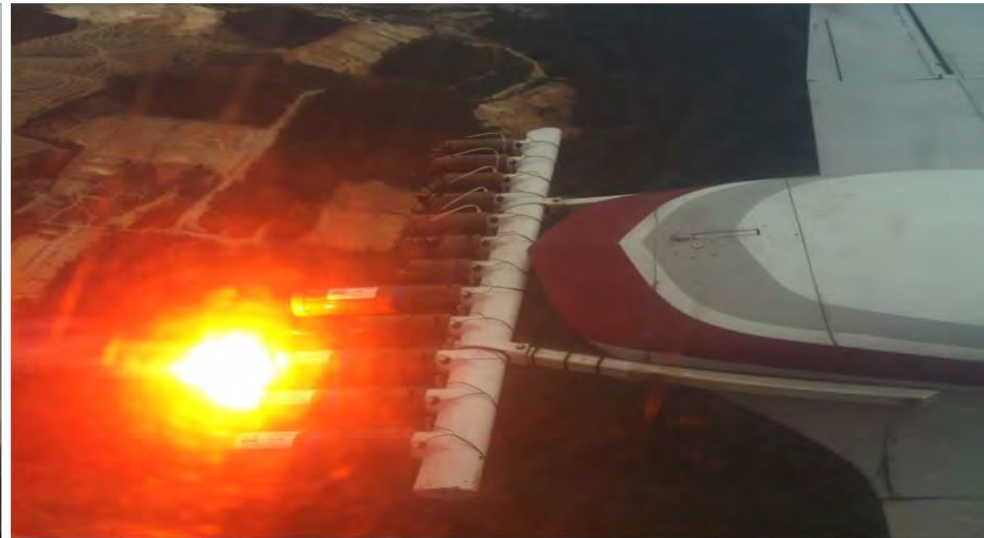


Flood area reduction



Problem solving initiative

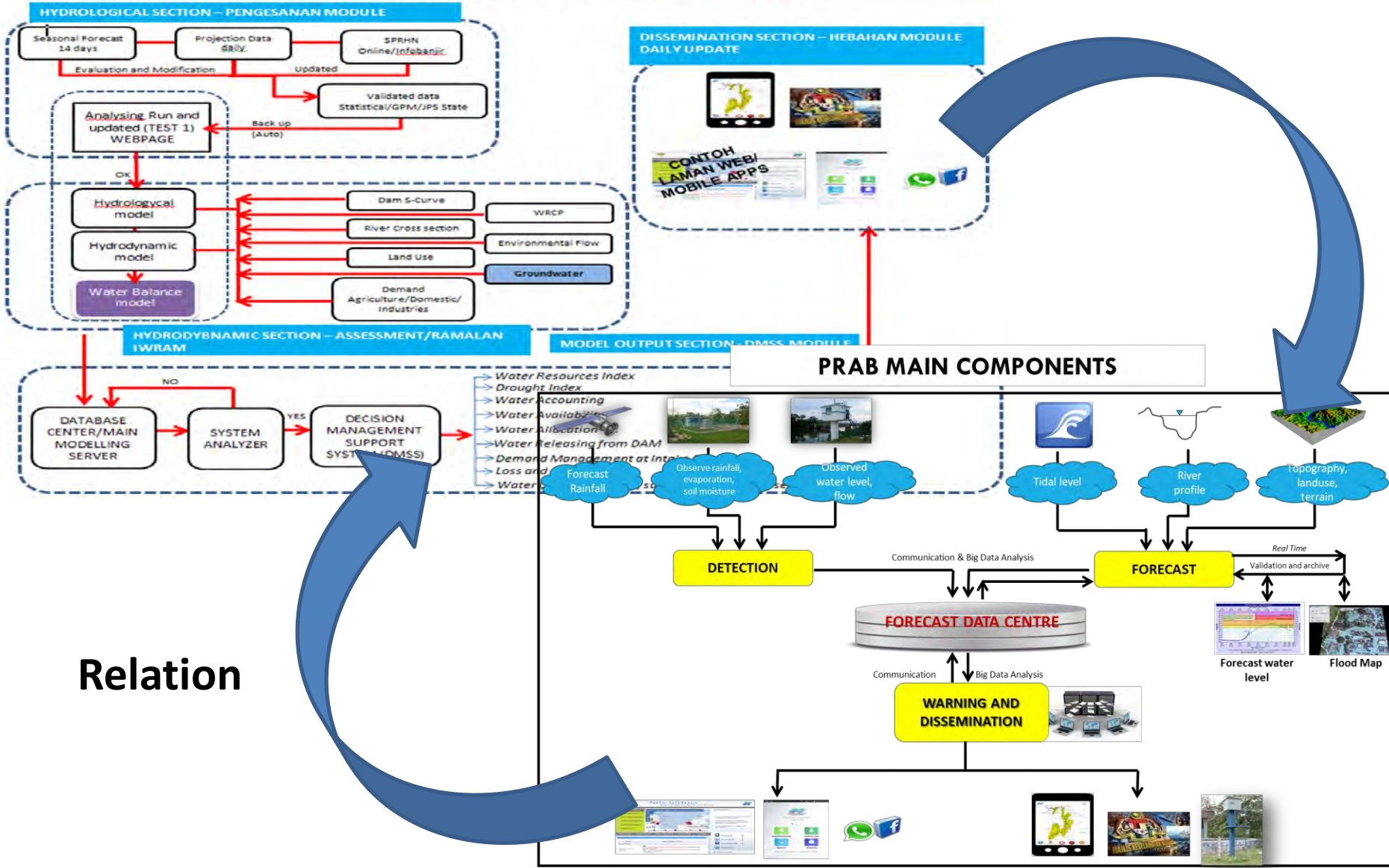
Weather Modification - Cloud Seeding Program



Problem solving initiative

PROGRAM PEMBANGUNAN WATER BALANCE FASA 1 INTEGRATED WATER RESOURCES ACCOUNTING AND MANAGEMENT MODEL (IWRAM)

LAMPIRAN A



Relation

Conclusion



GOVERNMENT



PUBLIC



PRIVATE



NGO

- Overcomes fragmentation and overlap of responsibilities
- Integrate action across issues
- Strong foundation and mandate

- Strong knowledge base
- Strong community awareness and participation

- Cost-sharing programs, PES
- Voluntary actions; CSR

- Community advisory processes.
- Skills-based membership.
- Accountability

Conclusion

22 **interview with**
ZULKEFLI HASSAN

SUNDAY STAR, 12 JUNE 2016

focus 23

Water security for future generations



Waterman on a mission

To mark the recent World Environment Day, Sunday Star caught up with newly-appointed Drainage and Irrigation Department director-general Datuk Zulkefli Hassan to talk about his plans. The man with a flood-fighting mission is also making water security his priority.

By CHRISTINA CHIN
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Photos by IZZRAFQ ALIAS

30% of rice from countries like Thailand, Myanmar and India but these countries face

when we move out. After construction is done, we'll hand over our 4.8ha land in

Pahang, Perak and Sarawak, because these states are the ones worst effected by mon-

When is Nawabs kicking off? We're starting with Sungai Muda, Sungai

jects going on in Sarawak. They only need RM5mil to RM10mil to solve their flood woes

Sarawak? They need the Government's help. Flooding isn't always an engineering prob-

tion for flood mitigation works there. Projects are also on-going in Sungai Muar, Sungai Kemaman and Sungai Pahang. We know roughly how much rain each state gets in a year. The bulk of it is in December.

As of June 2, Sabah and the peninsula have received between 24% and 30% of the year's average rainfall, but it's already up to 78% in Sarawak. So based on statistics, Sarawak is safe because the amount of rainfall has almost reached the estimated level for the entire year.

But it's not that easy. When I was Pahang DID director, the big floods happened in Kuantan. On average, the rainfall in December is 300mm per month but during the big floods, we had 1,000mm in three days. So every year, we carry out preparations but how much it rains is out of our control.

You turn 60 next year. Are you looking forward to retirement? I'll retire August 2016 so I have about a year to achieve my goals. The previous D-G and I have relatively short tenures but the next guy who takes over should be given at least four years to carry out his duties. I've already identified four possible successors and am grooming them. It's important for continuity and implementation of projects.

I like to travel, so maybe when I retire - probably in Ipoh - I'll finally get to do that with my wife. I'd like to visit New Zealand. For now, I'm content watching TLC on Astro. I like exotic locations like Peru and the Bahamas.

DATUK Zulkefli Hassan has been busy leading DID officers nationwide since his appointment on March 21. The 59-year-old Perakian, who rose through the ranks from junior engineer more than three decades ago to Drainage and Irrigation Department (DID) director-general, explains what challenges his men face. Zulkefli, a father of three, also wanted to drive home the importance of integrity to them in his personal KPI. The youthful-looking grandfather is healthy jogging but with retirement just a year away, he has his work cut out for him. Recalling how his 51-year-old police father always stressed on education - regular haircuts - the third of four all jokes about his cropped army look and shares his plans to keep floods and drought at bay.

What's your main water management concern?

Water security because it concerns all sectors. Food, health, energy, industry, domestic sectors all need water. DID formed in 1992.

In the early days, the focus was on crops, farming and the rivers. Today, flood mitigation, drainage, coastal zones, hydrology and water resources because with climate change, we must.

Take food for example - we import almost

• Water security

- water used → water demand
- water storage → infrastructures → flood → drought
- management → basin unit → systems

swap deal.

The DID headquarters will also be upgraded. It'll house the Federal Territories office

better forecast. With all warning systems in place and linked up, we can give early alerts. We're starting with Kelantan, Terengganu,

the Water Resources Bill, which covers this, will take place by the end of the year or early next year.

We're very transparent - we take about flash floods in the city while the villagers suffer in silence. We've already got small pro-

jects like Selangor, Penang and Johor are okay because their assessment rates are high but what about the small towns in states like

the worst hit. In Sabah and Sarawak - Kuching in particular - the Minister (Dr Wan Junaidi) pushed very hard to secure alloca-