NATIONAL PLAN FOR ADVANCING ENVIRONMENTAL-ECONOMIC ACCOUNTING (NP-AEEA)

Jakarta, 14 April 2015

BPS – Statistics Indonesia

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introduction

The purpose of NP-AEEA:

- to **focus** the efforts of the NSO, the National Statistical System and other stakeholders, including international agencies,
- to **develop** a cost-effective, ongoing and effective statistical systems and related institutional mechanisms
- to **address** Indonesia's sustainable development policy objectives, building upon the new Medium-term Development Plan (RPJNM 2015-2019).

NP-AEEA will serve as a basis for:

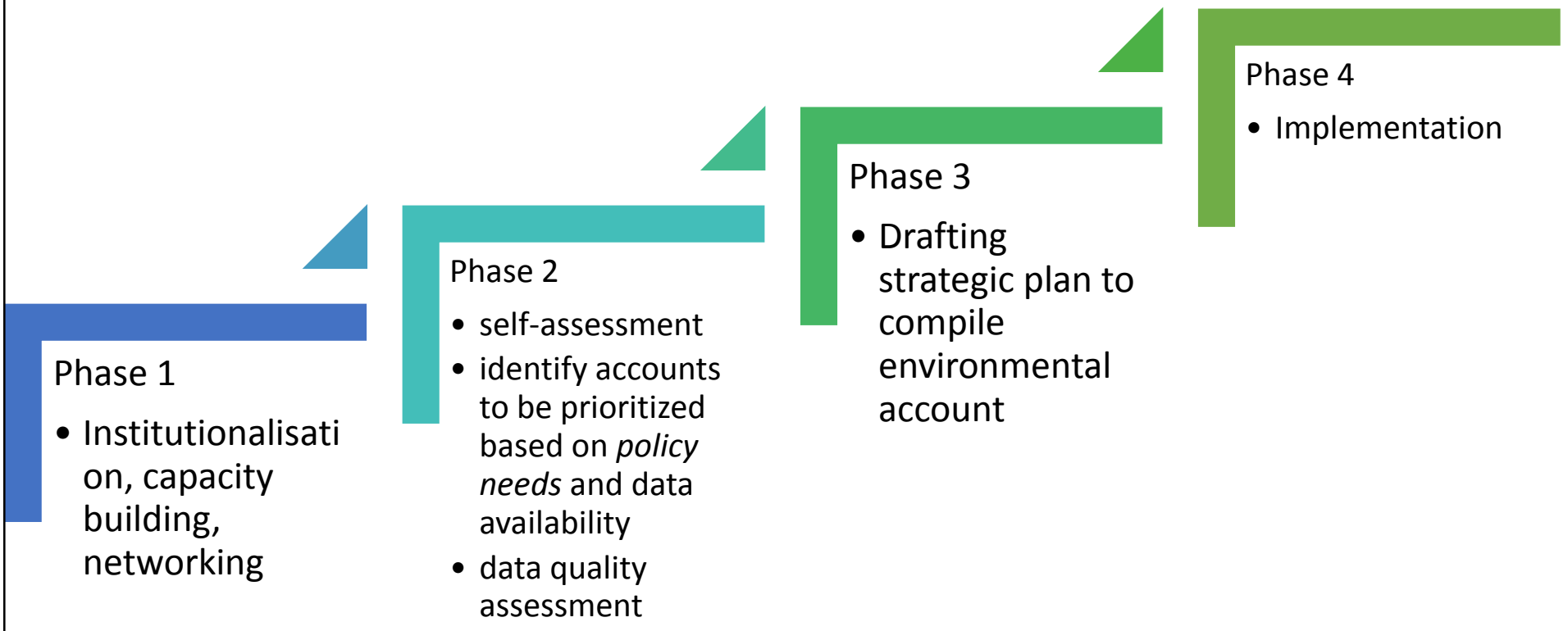
(a) **establishing the rationale** for an integrated statistical system for sustainable development information;

(b) **summarizing the priorities and opportunities** in Indonesia for further improvement of the National Statistical System with a focus on SEEA;

(c) **identifies the enabling factors** (preconditions for engaging in activities), activities, outputs, impacts and long-term outcomes of engaging in these activities; and by

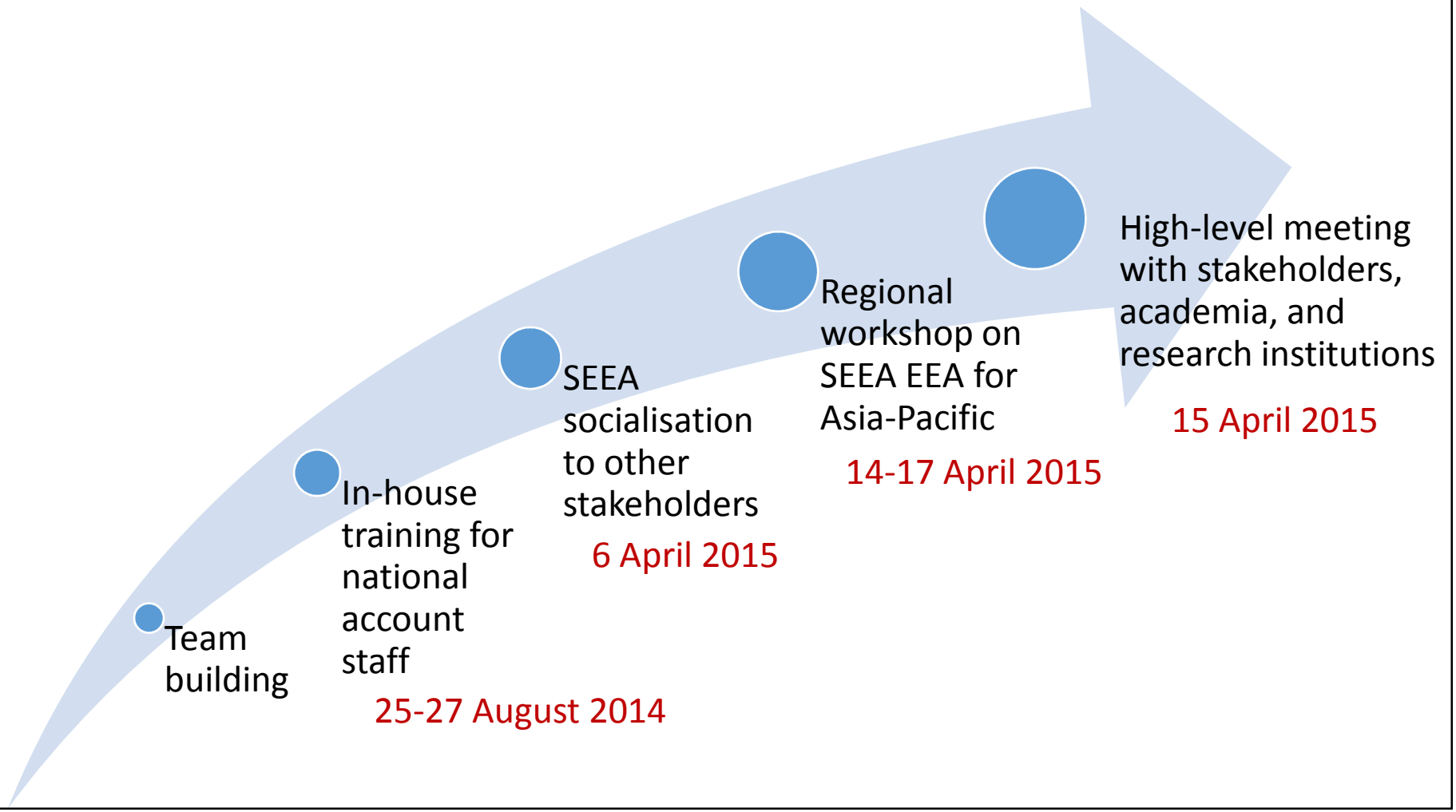
(d) **outlining the foundational activities** needed to implement environmental-economic accounting ready for use in fully developed and budgeted funding proposals.

4 Phases of implementation

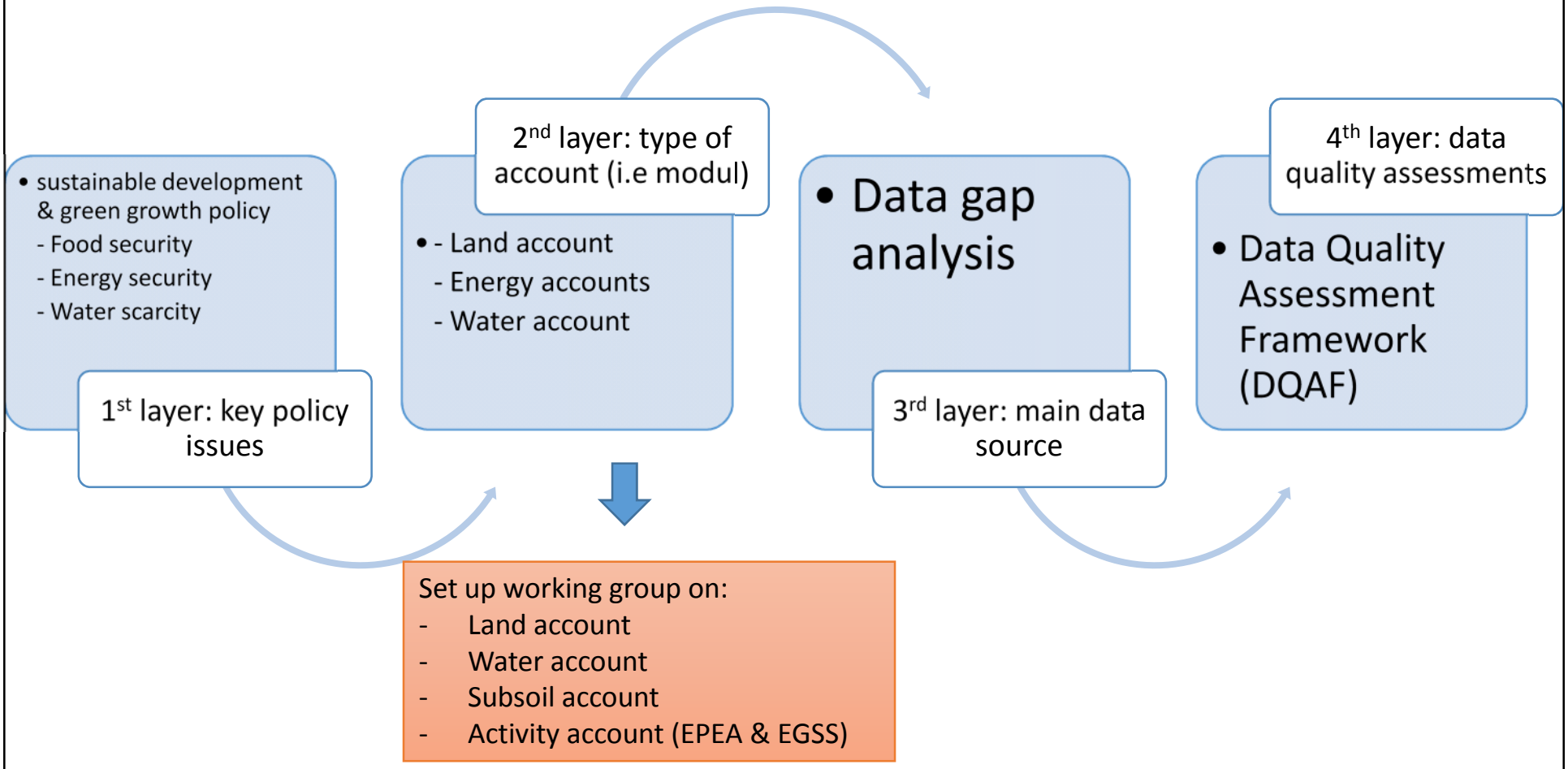


Phase 1: Institutionalisation

Institutionalisation, capacity building, and networking.



Phase 2: Self Assessment

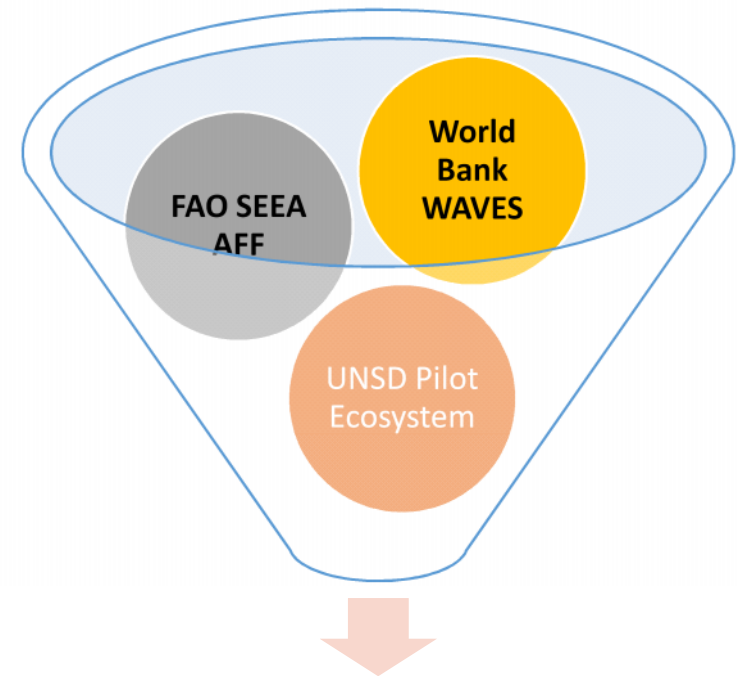


II. CURRENT INITIATIVES

RELEVANT PROJECTS AND INITIATIVES (1)

Relevant Projects/Initiatives	
The One Map program	It is essential for the NP-AEEA project, because it will lead to an accurate map of land cover as a basis for ecosystem accounting.
The Indonesian REDD+ program	It is relevant for the NP-AEEA project, because it will lead to up-to-date information on forest cover and status and carbon stocks. At the same time, the NP-AEEA project could inform the REDD+ program on co-benefits of REDD+ projects. This is a main issue in the design of REDD+ projects, since it would enhance the economic justification of these projects.
Gazetting Forest Lands	NP-AEEA project can benefit from this program by obtaining information on forest lands and forest uses. It can also contribute coherent land data to support the development of land reform.
The Green Economy Program	This program highlights the need for the NP-AEEA as a tool for policy makers to monitor progress to green development and as a source of data on land use

RELEVANT PROJECTS AND INITIATIVES (2)



SEEA implementation

NP-AEEA project would collaborate with WAVES through coordinating capacity building activities, and by coordinating through the same Steering Committee

- Based on SEEA 1993
- Coverage is limited to 9 significant natural resources
- Only compute depletion to derived indicator of Net Domestic Product (NDP)-1 or Brown GDP
- Attempted study on degradation to derived Green GDP

SCOPE OF WORK

IMPLEMENTASI SEEA DALAM SISNERLING (APBN)

SEEA CENTRAL FRAMEWORK

NERACA ASET

SISNERLING	SEEA-AGRI
	Asset Accounts for Land Cover (2012)
	Asset Accounts for Land Use
1. KAYU JATI	Asset Accounts for Forest and Timber Resources (2012)
2. KAYU RIMBA	Asset Accounts for Livestock
3. MINYAK	Asset Account for Timber Resources
4. GAS	Asset Accounts for Water Resources
5. BATUBARA	
6. BAUKSIT	
7. TIMAH	
8. EMAS	
9. NIKEL	

NERACA FLOW

SEEA-AGRI
Monetary Supply and Use for Agricultural Products
Physical Flow Account for Fertilizer
Physical Flow Accounts for Food Crops
Physical Flow Accounts for Livestock Products
Physical Flow Account for Energy Use
Physical Flow Account for Timber Product
Physical Flow Accounts for Pesticides
Physical Flow Accounts for Water Distribution and Use
Physical Flow Account for GHG Emission
Physical Flow Accounts for Water Abstraction

NERACA FUNGSIONAL

EPEA	EGSS	SEEA-AGRI
APBN FUNGSI LINGKUNGAN HIDUP	SURVEY DI DKI, JABAR, BANTEN	Extended Production and Income Accounts for Agricultural Activities

PENGOLAHAN DATA SEKUNDER IBS

INDEPTH DI BEBERAPA PERUSAHAAN

INTEGRASI NERACA

SISNERLING
NERACA TERPADU

NERACA EKOSISTEM

INDONESIA

PILOT DI 3 PROV

WAVES (WORLD BANK)

SEEA AFF (FAO)

PILOT ECOSYSTEM (UNSD)

Enabling factors

There are a number of global and national drivers which provide the rationale for the development of an environmental-economic accounts program of work.

Country perspective:

- The Long Term Development Plan (RPJPN 2005-2025)
- Medium-Term Development Plans (RPJMN 2010-2014, 2015-2019)
- The Green Economy Program
- The Law on Protecting and Managing the Environment (UUPPLH 2009)
- The Spatial Planning Law (UUPR 26/2007)
- OneMap and OneData Programs
- The Indonesia REDD+ Program
- Gazetting forest lands
- The World Bank coordinated WAVES Indonesia project
- Initiatives on decentralization

The Medium-term Development Plan (2015-2019)

- the importance of economic development through the improvement of food, energy and water security, the development of marine and ocean resources and the maintenance of bio-resources and environmental quality
- social issues are also highlighted in terms of accelerated poverty reduction, regional and rural development, and disaster management
- *regional development policies are directed at inducing the acceleration of development in the regions of Kalimantan, Sulawesi, Nusa Tenggara, Maluku and Papua, while maintaining the momentum of development in the Java-Bali and Sumatra regions*

The integrated nature of the objectives linking environment and economy suggests the need for integrated and coherent information, which the NP-AEEA can provide

The Green Economy Program

- launched by the Second United Indonesia Cabinet program as part of its sustainable development plan, which is pro-growth, pro-job, and pro-poor
- promotes food security through sustainable agriculture, sustainable forestry management, efficiency and renewable energy usage, clean technology support, waste management, efficient and low carbon transportation management and green infrastructure development
- Specific policies include
  - reforms of subsidies for electricity industries to reduce greenhouse gas emissions,
  - reforms of fuels subsidies making them more targeted,
  - new policy instruments for the promotion of renewable energy such as geothermal and other clean energies,
  - incentives for industries that promote environmental friendly products

This program highlights the need for the NP-AEEA as a tool for policy makers to monitor progress to green development and as a source of data on land use

Laws and regulations

The Law on Protecting and Managing the Environment (UUPPLH 2009)

- requires an inventory of all natural resources, and conducting Strategic Environmental Analysis (SEA)
- calls for all departments to develop economic instruments, one of which is environmental-economic accounting

Indonesia's Spatial Planning Law (UUPR 26/2007)

- requires public participation in land use decisions
- lack of clarity in this law leads to confusion and conflict regarding land tenure

NP-AEEA land accounts can help establish a standard classification of land according to land cover, land use and ownership and to reflect these in publicly available maps through OneMap.

The OneMap Program

- several different institutes involved in the registration of land cover, land use, legal status of lands and land ownership (e.g. Bappenas, the line Ministries such as Forestry and Agriculture, District level administrators, the cadastre) →data of these different agencies do not always match
- OneMap program is scheduled to release results in May 2015 and aims to develop a generally agreed land cover, use and ownership data system

The OneMap program is essential for the NP-AEEA project, because it will lead to an accurate map of land cover as a basis for ecosystem accounting.

The Indonesian REDD+ (Reducing Emissions from Deforestation and Forest Degradation) program

- Given that the forests and, in particular, peat lands of Indonesia are important carbon storage reservoirs and that Indonesia is currently, after the US and China, the world's largest carbon emitter (in particular due to land use change)
- Several REDD+ projects have been started now (requiring three permits per project including an ecosystem rehabilitation permit)
- The Norwegian-funded REDD+ program, implemented by UKP4 has identified eleven priority provinces for which basic carbon maps will be produced (together these provinces contain the large majority of forests and carbon stocks)

The REDD+ program is relevant for the NP-AEEA project, because it will lead to up-to-date information on forest cover and status and carbon stocks. At the same time, the NP-AEEA project could inform the REDD+ program on co-benefits of REDD+ projects. This is a main issue in the design of REDD+ projects, since it would enhance the economic justification of these projects.

Gazetting forest lands

- Important to demarcate the forest use boundary
- Different legal requirements for lands classified as forest and land classified for other uses including agriculture (which includes palm oil plantations)
- BIG (Badan Informasi Geospasial: the Geospatial Agency) has developed the spatial standards and is proceeding to mark and gazette 100% of the forest territory → Only 10% is completed so far.
- On Indigenous Peoples' lands (IPs), government claims have been abolished following a judgement of the Supreme Court → This could lead to increased forestry and agriculture concessions on formerly protected lands
- Nota Kesepahaman Bersama (NKB12) is an MoU among 12 Ministries to accelerate land reform including managing land use concessions, resolving conflicts and improving law enforcement

NP-AEEA project can benefit from this program by obtaining information on forest lands and forest uses. It can also contribute coherent land data to support the development of land reform.

The World Bank coordinated WAVES Indonesia project

- Indonesia WAVES program's principal partner agency is Bappenas
- WAVES has developed a set of priorities for supporting Indonesia with better recording of environmental assets
- Priority actions include: assisting BPS to adopt the SEEA 2013 framework, support for Mineral and Water accounts, and support for further application of the Adjusted Net Savings approach
- WAVES will also devote specific attention to the linking of statistical data development and policy use of these data

NP-AEEA project would collaborate with WAVES through coordinating capacity building activities, and by coordinating through the same Steering Committee

Strengthening the National Statistical System and improving information on sustainable development

- BPS has published pilot SEEA accounts for minerals and timber (SISNERLING) as well as a general reports on environmental indicators and natural assets. The World Bank, through STATCAP/CERDAS is supporting BPS in statistical capacity building.
- Kementerian LHK has published a State of the Environment Report. To do so, it has developed some environmental-economic capacity in terms of linking environmental conditions with socio-economic drivers.
- Bappenas, the national planning agency, has specific responsibility for land management including land licenses and maintaining the cadastre (land registry). Bappenas has included food and water security targets in the medium-term development plan (RJPMN) and is also the lead agency for monitoring progress towards green economic development.
- The Ministry of Finance has an interest in environmental-economic accounting to support its requirements to report on the financing of climate change initiatives.
- LAPAN, the remote sensing agency, conducts the INCAS program to detail land cover change. Supported by Japan's Aerospace Exploration Agency (JAXA) to support Indonesia's Carbon Accounting Initiative.
- BPPT, the agency for the assessment and application of technology, conducts resource accounting for mining, forest and land suitability for agriculture.

NP-AEEA will provide a common platform to focus the National Statistical System on providing coherent data to address their reporting and monitoring requirements.

Indonesia Environmental-Economic accounting

Past and on-going work in Indonesia has already led to a number of project based institutional arrangements for the development and implementation of environmental accounting

The need for:

(a) a comprehensive environmental-economic accounting information system;

(b) enhanced institutional coordination within Indonesia and between levels of government and initiatives;

(c) training and capacity building in environmental-economic accounting;

(d) enhanced coordination with international and donor agencies;

(e) addressing challenges of resourcing, data quality, access, technical capacity and statistical infrastructure;

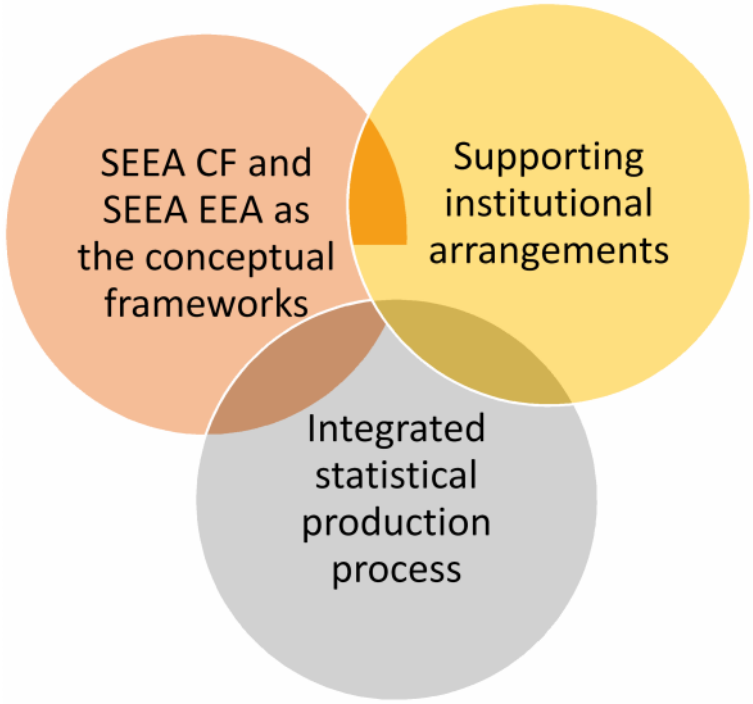
(f) the development of key aggregate statistics; and

(g) immediately beginning work on priority accounts.

It is necessary to engage relevant stakeholders, including key data providers and users of environmental-economic accounts

Program of work building blocks

The integrated approach to environmental-economic statistics



The building blocks, or high-level outcomes of the NP-AEEA

1 Mainstream the environmental-economic accounting

Rationalise and integrate institutional arrangements 2

3 Integrate the data, tools and statistical production process

Core and required

Ecosystem Accounting Experimentation 4

Expanded building blocks

The building blocks

1. **Mainstream the environmental-economic accounting**
   - The foundations of the GSBPM are quality management and metadata management frameworks of which the SEEA is one
   - The framework builds on SNA principles but is extended based on ecological foundations, and under the umbrella of SEEA-CF and SEEA-EEA
   - These processes combine available knowledge from many disciplines and agencies

2. **Rationalise and integrate institutional arrangements**
   - The "One-UN" process recommends that countries move towards one integrated National Statistical System
   - Clearly for any new system, process or framework that impacts so many agencies to be adopted by government requires very careful assessment of current institutional arrangements and possible impacts
   - it does require a rationalising of the standards used for data collection and strengthening the National Statistical System to share data in real time where appropriate

3. **Integrate the data, tools and statistical production process**
   - Environmental-economic accounting is a trans disciplinary activity
   - links to GSBPM Phases 3, 4, 5 and 6 and addresses the main challenges of data gaps, scientific credibility, comparability and data uncertainties that can be bridged by building on the existing data systems, methods and tools
   - Many of the tools and infrastructure required already exist however need review and assessment of current systems and approaches following by the development of a strategic investment plan

4. **Ecosystem Accounting Experimentation**
   - Testing the SEEA-EEA is part of a global experiment to develop effective ecosystem accounts
   - Experimentation also serves as important vehicle for achieving the mainstreaming of ecosystem accounting

Combining the building blocks & GSBPM to produce official statistics

The building blocks

Core and required

1. Mainstream the environmental-economic accounting
2. Rationalise and integrate institutional arrangements
3. Integrate the data, tools and statistical production process

4. Ecosystem Accounting Experimentation

+

Generic Statistical Business Process Model (GSBPM)

Institutional Framework

Quality Management / Metadata Management							
Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8
Specify Needs	Design	Build	Collect	Process	Analyse	Disseminate	Evaluate
Sub-processes to support the delivery of each phase							

Institutional Framework

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PRODUCE OFFICIAL STATISTICS

Methodologies

Institutional framework

- High level commitment, and engagement of partners; common coordination; data collection/sharing implications
- Advisory committees (IES, p. 39)
- Legislation, mandates to coordinate, produce, supply inputs etc.
- Inter-institutional commitments for production of integrated statistics – MoU (IES, p.41)
- Inter-departmental commitments – service-level agreements (IES, p.42)
- Programme governance structure development

Roles and responsibilities for environmental-economic accounting

- Working groups
- Advocacy
- Workshops – policy, awareness-building, etc.
- Demonstrations
- Feasibility
- Proof of concept – experimentation, structural change,
- Training sessions
- Customised communications plans

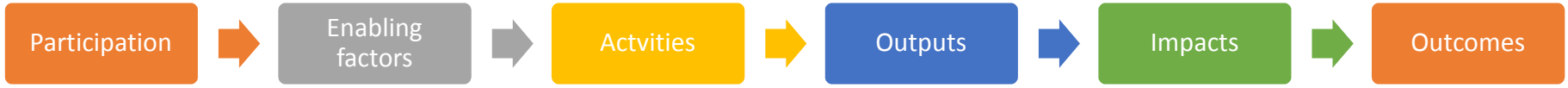
Environmental-Economic accounts production process

- Data collection (or generation – through sampling, inventories/surveys, detailed process-modelling, remote-sensing applications, course-process modelling);
- data harmonization (processing, quality control, imputation);
- accounting inputs;
- accounting outputs estimation
- accounts validation

Research, development and experimentation

- Accounting classifications , with standardised item definitions and measurement methods
- Country specific classification of ecosystem assets
- Units for ecosystem accounting
- Environmental indicators and aggregates
- Up scaling and downscaling
- Valuation
- Validation data and specific quality criteria need to be developed to formally track progress

NP-AEEA – Investment Logic Framework (ILF)



Participation	Enabling factors	Activities	Outputs	Impacts	Outcomes
Core members: Ministry of Planning (BAPPENAS) Statistics Indonesia (BPS) Ministry of Finance (MenKeu) Ministry of Environment (KLH) --- (Not yet engaged:) - Ministry of Agriculture - Ministry of Forestry - LAPAN, BPPT, BIG, BKPRN - Ministry of Marine Affairs and Fisheries - Others: Bureau of Logistics, Ministry of Foreign Affairs (DepLu) - Universities - NGOs - Civil society	SEEA Steering Committee - Governance structure - Technical working groups Training and apacity development Access to data Funding Coordination with related national and international activities Funding proposals Implementation plan Access to external expertise A common geospatial infrastructure and other statistical infrastructure Statistical standards	Building priotity ecosystem accounts: - Data inventory - Data exchange - Data quality assessments - Data development (integration) - Application of common concepts, classifications and standards - Transformation of data into accounting structure - Research on ecosystem services and well-being Capacity building: Human resources - Training and capacity buiiding (workshops and courses) - Awareness-building, communications and outreach Capacity building: Infrastructure - Development of common spatial infrastructure - Determination of common statistical standards Statistical management - Project planning and evaluation	Land accounts (including, forest, agriculture and ownership) Water asset, supply and use accounts Carbon stock, supply and use accounts Ecosystem service accounts (flood protection) Economic aggregates: Adjusted Net Savings Optional: - Ecosystem condition accounts - Biodiversity accounts - Other ecosystem service accounts - Case studies on ecosystem services and well-being - Publications on accounts and derived indidators - A comprehensive shared national set of environmental-economic accounting information - Publicly-available environmental-economic data	Mainstreaming of environmental-economic accounts into planning and decision making - providing ministers and their agencies with empirical evidence of changes resulting from sustainable development policies - Integrated indicators on sustainable development - a civil service and civil society that is informed about environment and developement - improved knowledge on ecosystems and well-being - improved statistical collaboration between sectors and agencies - better policies, decisions on trade-offs between development and conservation	A comprehensive set of environmental-economic accounting information Enhanced institutional coordination within Indonesia Improved data infrastructure Increased awareness and technical capacity Enhanced coordination of support from international and donor agencies Stronger links with existing platforms for sustainable development and green economy A more integrated, effective and sustainable National Statistical System

Overview of policies and accounts relevant to environmental-economic accounting in Indonesia

Type of account or aggregate	Policy or issue	Agencies
Land accounts (including forest and agricultural land)	RPJNM 2015-2019, Gazetting Forest Lands, Spatial Planning Law, Green Economy, food security, REDD+, Aichi Target 2, OneMap	BPS, LHK, BAPPENAS, MenKeu, DepTan, Bulog, LAPAN, BPPT, BIG
Water Asset Accounts; Water Supply and Use Accounts	RPJNM 2015-2019, Green Economy, Spatial Planning Law	BPS, LHK, BAPPENAS, MenKeu, DPU, LAPAN, BPPT
Carbon Stock Accounts; Carbon Supply and Use Accounts;	RPJNM 2015-2019, Green Economy, Climate Change, REDD+	BPS, LHK, BAPPENAS, MenKeu, DehHut,
Ecosystem service accounts (especially for flood control)	RPJNM 2015-2019, Green Economy, Climate Change	BPS, LHK, BAPPENAS, MenKeu, BNPB
Adjusted Net Savings and economic valuation of natural capital	Financing of environmental initiatives	BPS, BAPPENAS, MenKeu
Optional: Ecosystem Condition and Biodiversity Accounts	RPJNM 2015-2019, Green Economy, REDD+, Aichi Target 2,	BPS, LHK, BAPPENAS

Capacity building & Infrastructure

Capacity building

- Workshops :
  - environmental-economic accounting (April 2015)
  - water accounting (2nd half of 2015)
  - land accounting (2nd half of 2015)
  - ecosystem service accounting (2nd half of 2015)
  - carbon accounting (2nd half of 2015)
  - economic aggregates (1st half of 2016)
- Government Officials and other stakeholders participating in relevant international meetings (such as the planned regional workshops on environmental-economic accounting);
- Use of distance or on-line learning;
- Placement of project staff in countries or international agencies with existing environmental-economic accounting programmes; and
- Sponsorship of account producers or user for relevant higher degree studies (e.g. on economics, ecology and accounting) in universities.

Infrastructure

- Ensuring that the account developers have the necessary information technology and data to support the development of accounts.
- A specific need of BPS is to augment their expertise and information technology needed to integrate the spatially referenced environmental information of other agencies with their social and economic information.
- As part of the NP-AEEA, access to remote-sensing data will also be needed

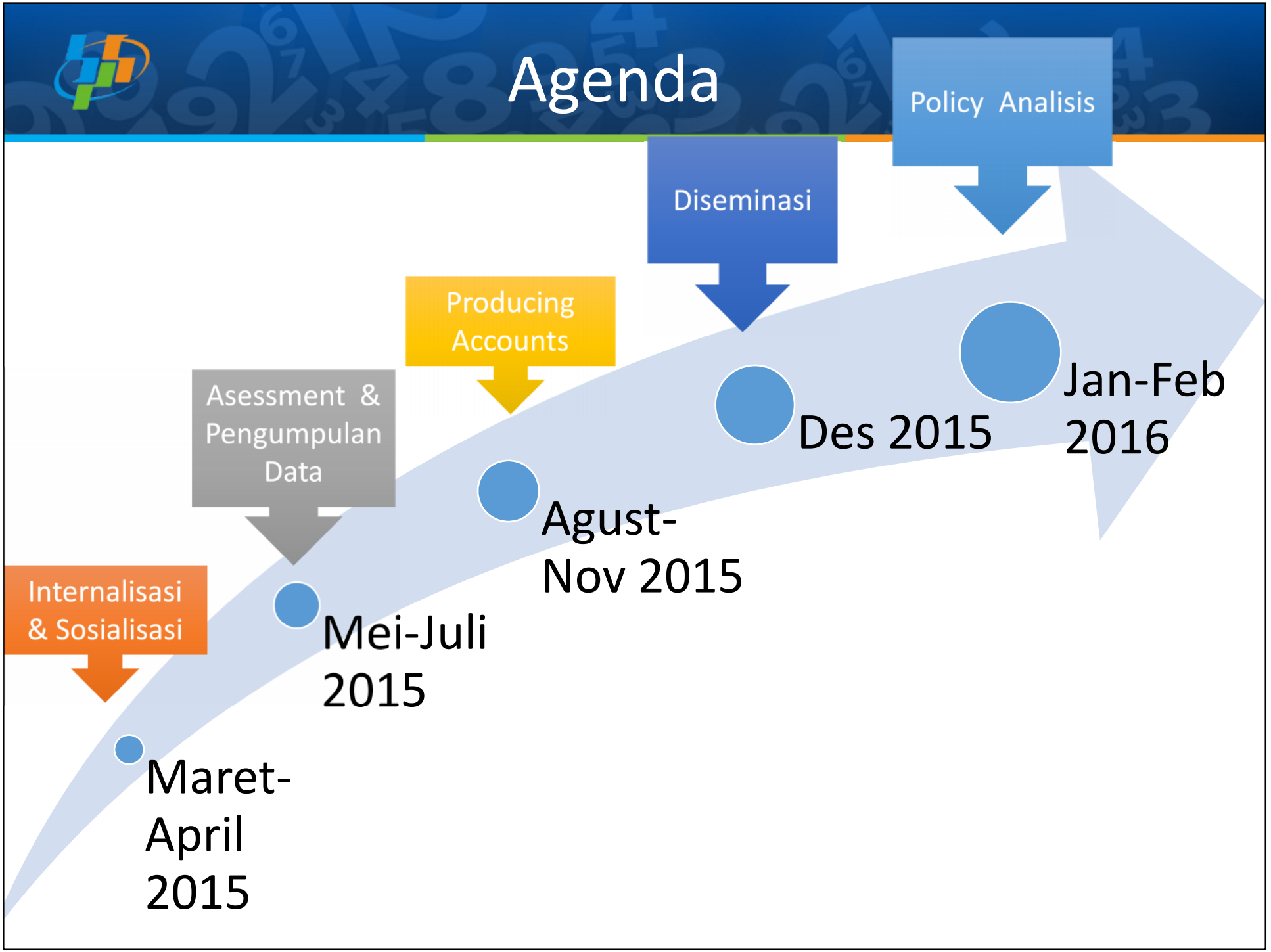
Linking activities to impacts

Activities	Impacts
Building priority accounts based on policy needs	Providing Ministers and their agencies with empirical evidence of changes resulting from sustainable development policies Improved knowledge on ecosystems and well-being Better policies, decisions on trade-offs between development and conservation Foundations to build integrated indicators on sustainable development
Capacity building **Human resources** **Infrastructure**	The ongoing capability to integrate environmental-economic information into government decision making Training for agency and academic staff to support the ongoing implementation of environmental-economic accounts A civil service and civil society that is informed about environment and development The ongoing cost effective production of environmental-economic accounts that meet the needs of policy in a timely manner Improved statistical collaboration between sectors & agencies
Development of key aggregates	Provide Ministers and their agencies with empirical evidence linking government policies to sustainable development goals

Conclusions and Next Steps

- The focus of the NP-AEEA is on medium-term (3-5 year) activities that will produce substantial new information to address Indonesia's sustainable development policy priorities.
- The NP-AEEA provides the foundations to write proposals that provide full details for each activity and the funding required.
- Opportunities for funding come from many different sources: national initiatives, international agencies, national development agencies and the refocusing of current work.
- It is therefore important that all stakeholders are familiar with the plan and bring such opportunities to the attention of the lead agency.

Agenda


Policy Analisis
Diseminasi
Producing Accounts
Asessment & Pengumpulan Data
Internalisasi & Sosialisasi
Maret-April 2015
Mei-Juli 2015
Agust-Nov 2015
Des 2015
Jan-Feb 2016

Lessons from building and using accounts

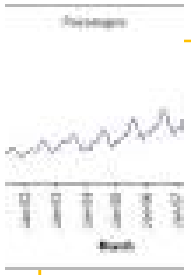
Need strong partnerships between (1)agencies (2)professions

All links of the chain data-accounts-analysis-policy use

it will seldom be complete, perfect and there will sometimes be conflicting data. You can fill gaps later

Need strong partnerships

Use what basic data are available now



Accounts get better over time

The best way to learn is to do

The accounts will never be perfect but will get better over time. The more often you produce accounts the more useful they become

The best way to learn is to do – experimental accounts are very useful and provide a reason for different groups to talk to each other

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