INDONESIA´S APPROACH TO UPDATING ITS NDCs: KEY LESSONS LEARNED

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Annual Meeting of the Thematic Working Group on Agriculture, Food Security and Land Use

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OUTLINE OF PRESENTATION

1. Indonesia's NDC Highlight
2. NDC Implementation and Updating
3. Contributions of International organisation
4. Lessons Learned

INDONESIA'S NDC HIGHLIGHT (1)

- Indonesia's target is to reduce the amount of emissions by 29% and increase it up to 41% by 2030 with the support of international cooperation.
- Mitigation Sectors: Energy, waste, industrial processes and product use (IPPU), agriculture, and forestry.
- Adaptation Sectors: Agriculture, water, energy security, forestry, maritime and fisheries, health, public service, infrastructure, and urban system

Agriculture accounts for 14% of Indonesia's total emissions (excluded the land use).

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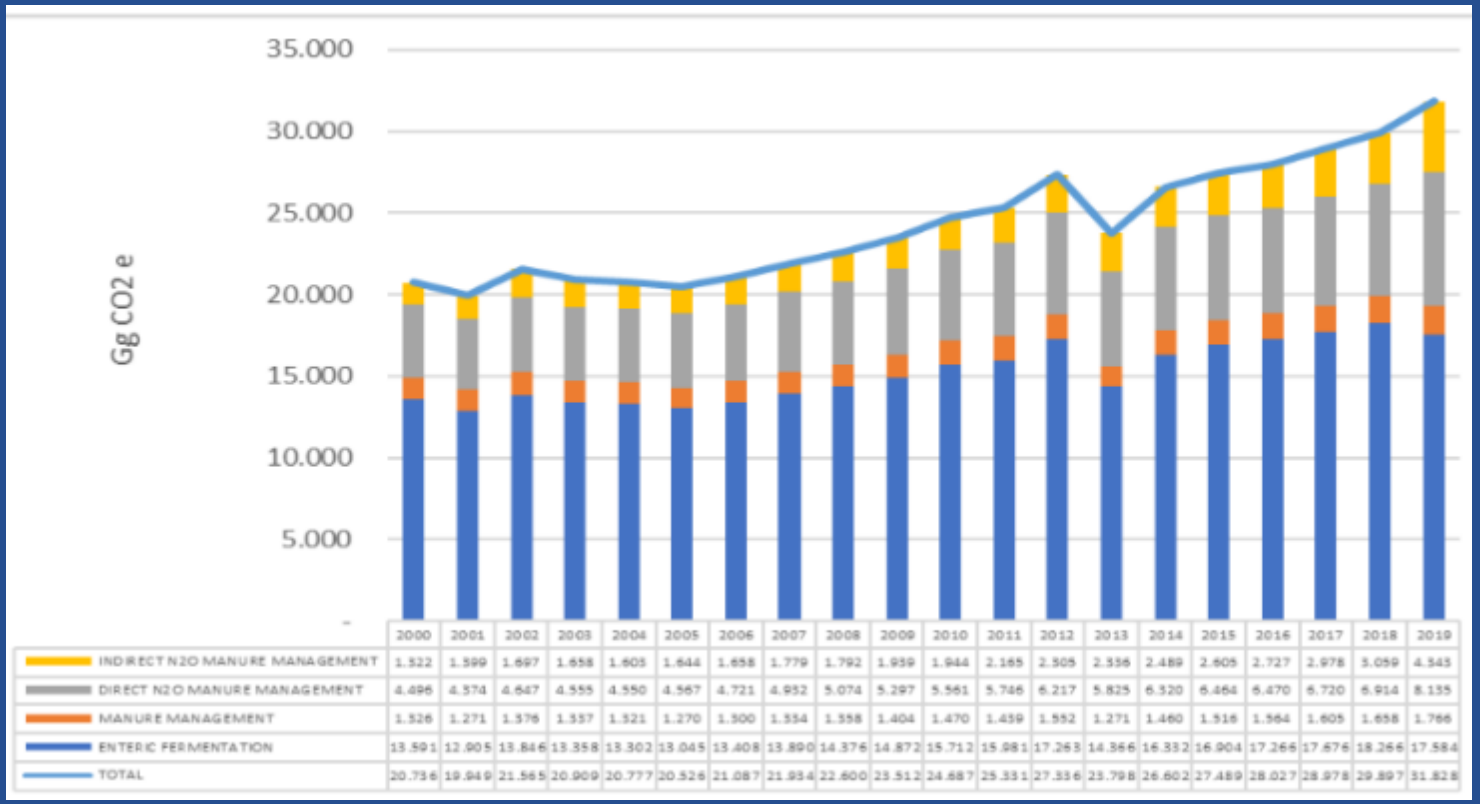
INDONESIA'S NDC HIGHLIGHT (2)

Indonesia's emissions from Livestock



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
INDIRECT N2O MANURE MANAGEMENT	1.522	1.599	1.697	1.658	1.605	1.644	1.658	1.779	1.792	1.959	1.944	2.165	2.305	2.336	2.489	2.605	2.727	2.978	3.059	4.545
DIRECT N2O MANURE MANAGEMENT	4.496	4.574	4.647	4.555	4.550	4.567	4.721	4.952	5.074	5.297	5.561	5.746	6.217	5.825	6.320	6.464	6.470	6.720	6.914	8.135
MANURE MANAGEMENT	1.326	1.271	1.376	1.337	1.321	1.270	1.300	1.354	1.358	1.404	1.470	1.459	1.552	1.271	1.460	1.516	1.564	1.605	1.658	1.766
ENTERIC FERMENTATION	13.591	12.905	13.846	13.358	13.302	13.045	13.408	13.890	14.376	14.872	15.712	15.981	17.263	14.366	16.332	16.904	17.266	17.676	18.266	17.584
TOTAL	20.736	19.949	21.565	20.909	20.777	20.526	21.087	21.934	22.600	23.512	24.687	25.331	27.336	23.798	26.602	27.489	28.027	28.978	29.897	31.828

Total GHG emissions from livestock = 31.828 GgCO2-e (2019)

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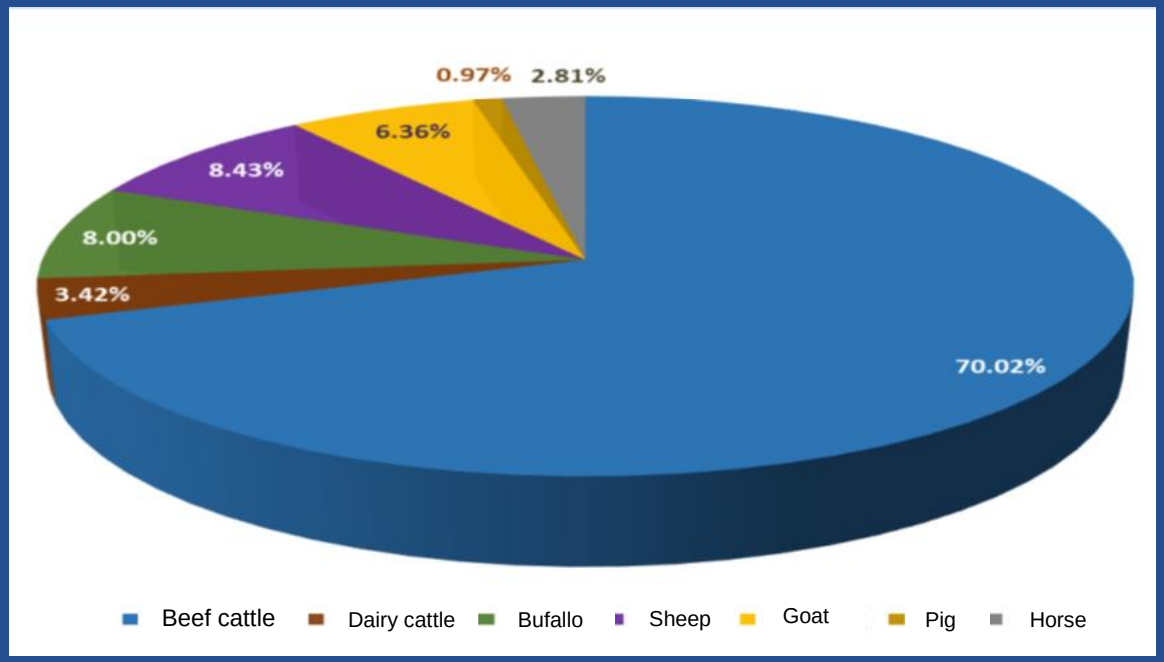
INDONESIA'S NDC HIGHLIGHT (3)

Indonesia's emissions from Livestock

CH4 from Enteric Fermentation



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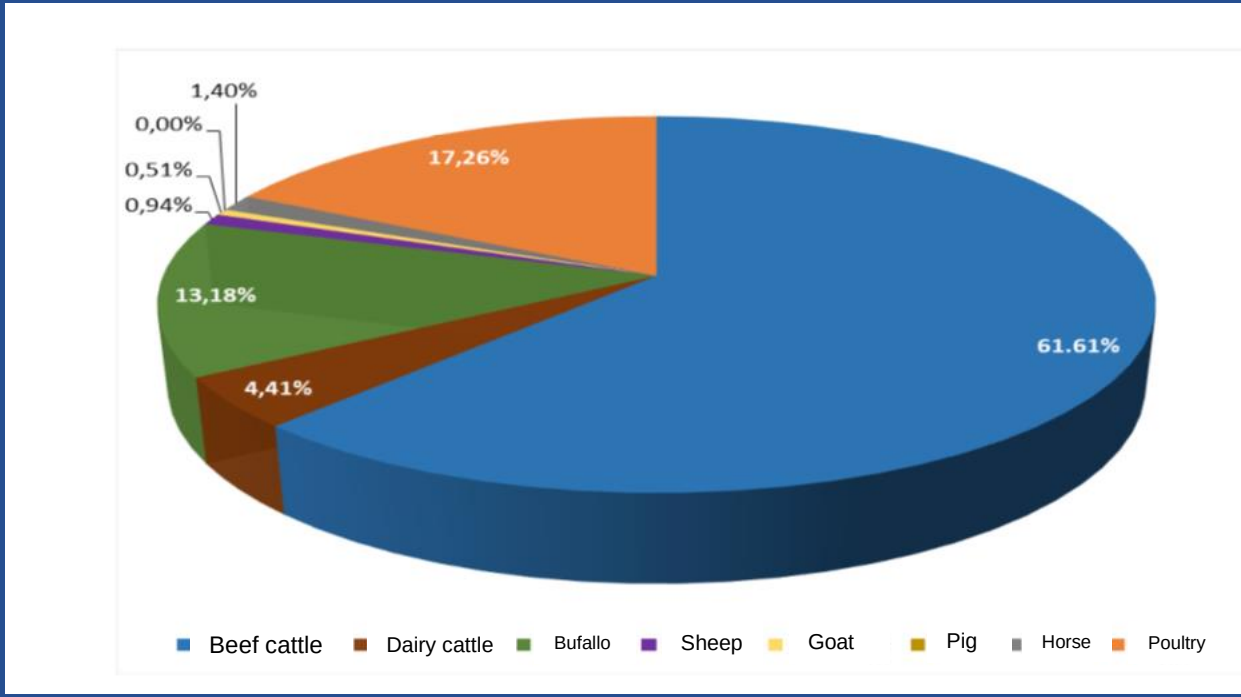
INDONESIA'S NDC HIGHLIGHT (4)

CH4 from Manure Management



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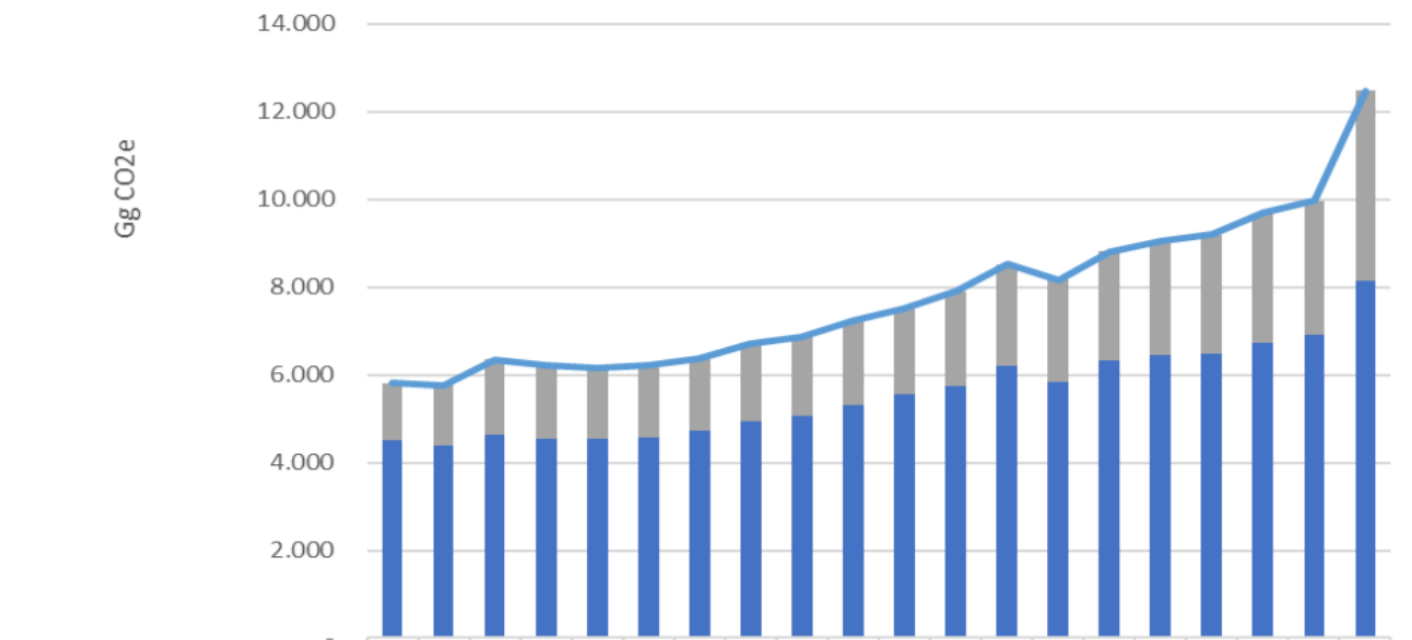
INDONESIA'S NDC HIGHLIGHT (5)

Direct and Indirect N2O From Manure Mangement



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
INDIRECT N2O MANURE MANAGEMENT	1.322	1.399	1.697	1.658	1.603	1.644	1.658	1.779	1.792	1.939	1.944	2.165	2.305	2.336	2.489	2.605	2.727	2.978	3.059	4.343
DIRECT N2O MANURE MANAGEMENT	4.496	4.374	4.647	4.555	4.550	4.567	4.721	4.932	5.074	5.297	5.561	5.746	6.217	5.825	6.320	6.464	6.470	6.720	6.914	8.135
TOTAL	5.818	5.773	6.344	6.213	6.153	6.211	6.378	6.711	6.866	7.236	7.506	7.911	8.521	8.161	8.810	9.069	9.197	9.697	9.973	12.478

INDONESIA'S NDC HIGHLIGHT (6)

- Indonesia's emissions remain on an upwards trajectory and yet it is still likely to overachieve its NDC targets
- In Indonesia, the largest source of emissions in the agricultural sector are from the cultivation of rice (40%), the cultivation of organic soils (21%), livestock (14%), and synthetic fertilizers (11%).
- Methane emissions (mainly enteric fermentation) need to decline by 10% by 2030 and by 35% by 2050 (from 2010 levels).
- Nitrous oxide emissions (mainly from fertilizers and manure) need to be reduced by 10% by 2030 and by 20% by 2050 (from 2010 levels).

INDONESIA'S NDC HIGHLIGHT (7)

Support Required:

1. Improving quality of Monitoring, Evaluating and Reporting
2. Improving capacity of researchers, including regional and local governments
3. Technology transfer; Technology dissemination; Pilot projects of improved systems

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NDC IMPLEMENTATION AND UPDATING (1)

NDC Implementation Strategies

I. BUILDING OWNERSHIP AND COMMITMENT	• Ministries/Institutions, sub-national government, private sectors, civil society, financial institutions
II. CAPACITY BUILDING	• Enhance capacity of institutions and human resources (elaboration of NDC, sectors and regions, GHG inventory, NDC implementation)
III. ENABLING ENVIRONMENT	• government regulations and policies (Act No. 16/2016 regarding Ratification of the Paris Agreement, PP. 46 /2016 regarding. SEIMA, etc.)
IV. DEVELOPING FRAMEWORK AND NETWORK	• coordinate and build synergy among sectors, regions and actors/stakeholders
V. ONE GHG-DATA POLICY	• SIGN–SMART: national GHG inventory system • SRN/National Registry System (incl. MRV): mitigation actions, adaptation actions, JMA, and MoI (finance, technology and CB)
VI. DEVELOPING POLICIES, PLANNING AND INTERVENTION PROGRAM	• Aligning NDC into development planning in 5 category sectors (forestry, energy, IPPU, waste, agriculture) and adaptation (sectoral and regions) ➔ assuring financial support (public fund) and resource mobilization (national and international support).
VII. DEVELOPING GUIDANCE ON NDC IMPLEMENTATION	• Guidance for national and sub-national (planning, implementation, MRV, and NDC review).
VIII. NDC IMPLEMENTATION	• refer to Programme VI and the planning of NDC implementation. • coordinated by MoEF (regarding emission reduction target and climate change policies) and BAPPENAS (regarding national development planning).
IX. MONITORING AND REVIEW OF NDC	• monitoring progress of NDC implementation. • review of NDC and its adjustment (if necessary, no-backsliding) will be conducted prior to 2020.

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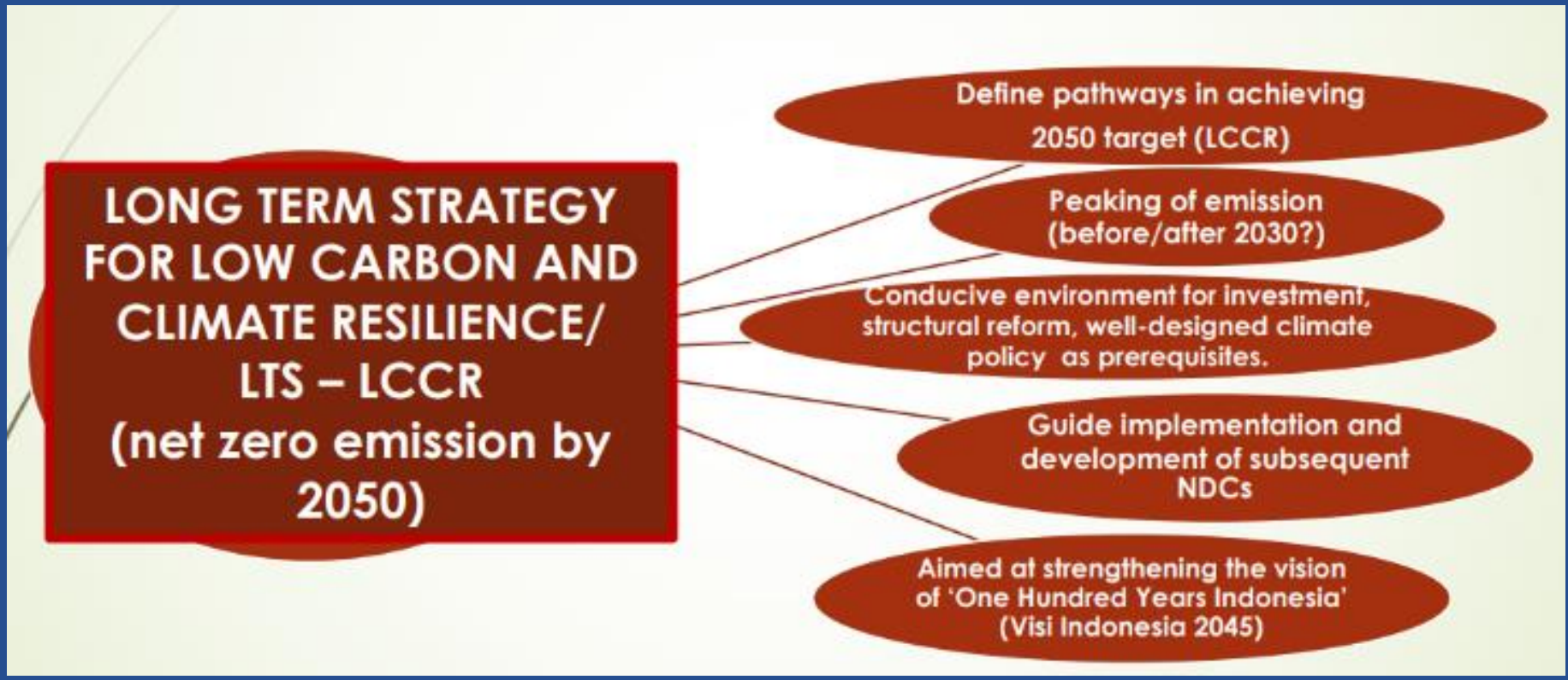
NDC IMPLEMENTATION AND UPDATING (2)

National Process in Preparing NDC Implementation and Transformation Towards Long Term Goals



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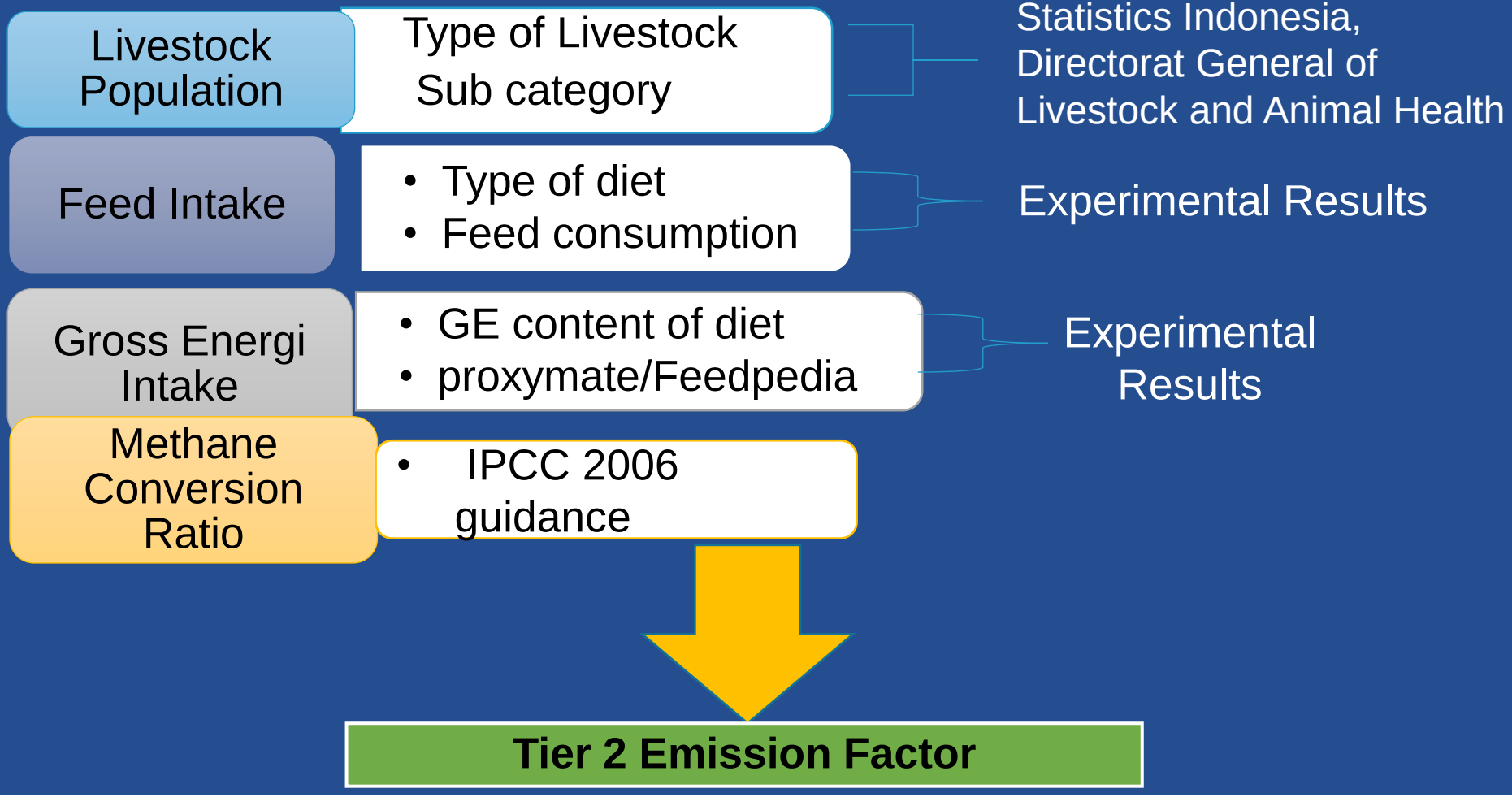
CONTRIBUTION OF GRA/FAO/NZ (1)



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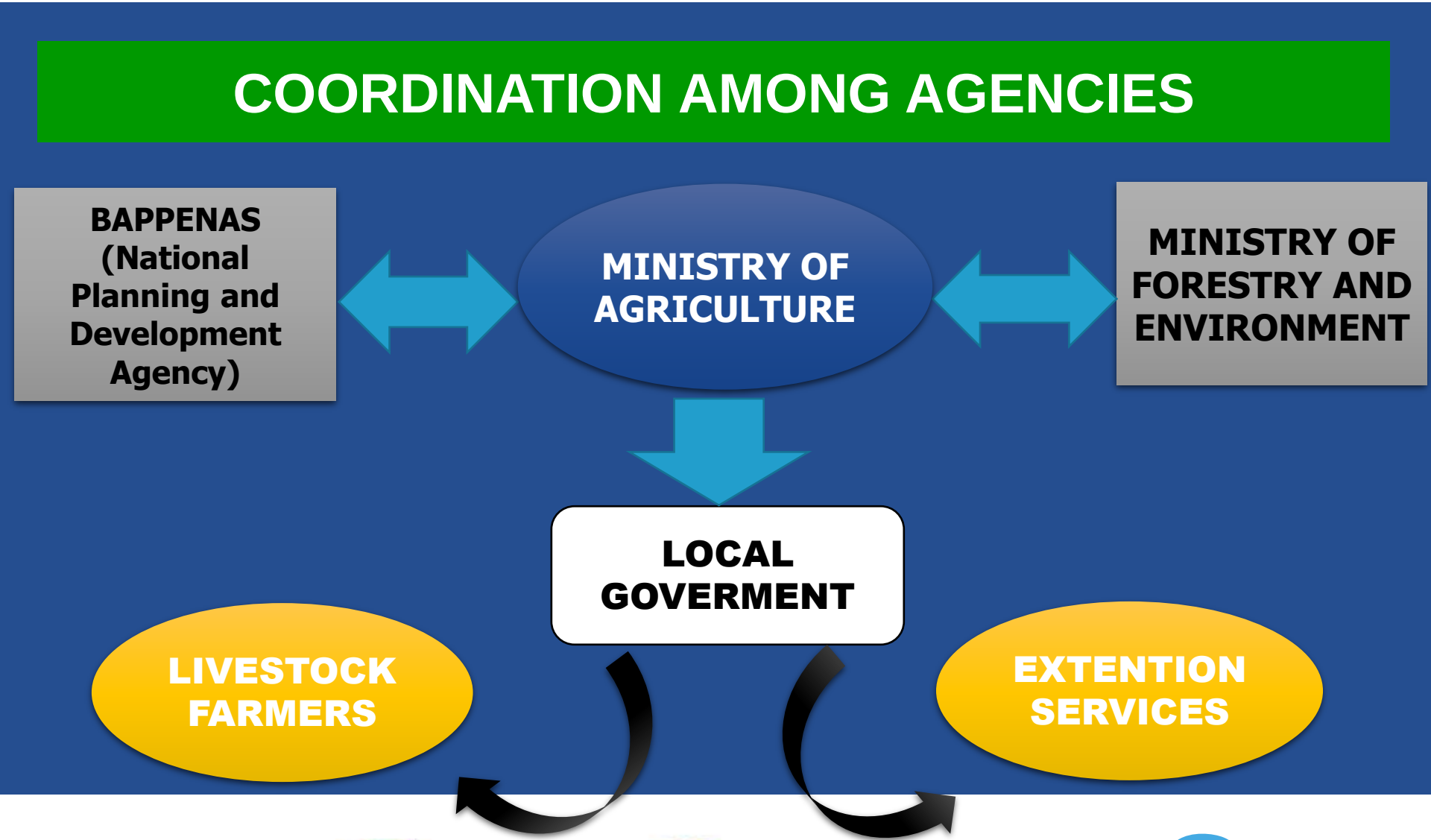
NATIONAL CONTRIBUTION



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LESSONS LEARNED (1)

Current livestock management systems vary depending on the socio-economic level and the scale of livestock enterprise:

- Smallholder traditional grazing on public land;
- Smallholder cut and carry of grasses from public land;
- Cut and carry fodder from improved grassland;
- Improved systems using quality grasses such as elephant grass, legumes, and concentrates.

LESSONS LEARNED (2)

The best practices include:

- Improved grazing of better quality grasses as well as tree legumes;
- Using manure for fertilizer;
- Artificial insemination by using selected bull;
- Bio-digestion of manure for producing CH4 as a source of energy.

LESSONS LEARNED (2)

Indonesia's set goals and measure progress in improving livestock management systems:

- Improved feed quality will increase the adaptation effect; (supplying good quality forage to smallholder farmers);
- Training the farmers on how to produce concentrate;
- Increasing the adoption through the dissemination and pilots activity;
- Emission reduction is also possible by developing anaerobic manure digestion plants; (for cooking and electricity)

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LESSONS LEARNED (3)

Indonesia' challenges face in improving livestock management systems:

- **Capacity : farmers' capacity needs to be increased to adapt and adopt technology**

- **Capital : Provide farmers with applied technology (feed technology, manure technology, veterinary technology, etc)**

WAY FORWARD

- Implementation of single data use (one data policy) regarding national GHG emissions calculation.
- Application of government program on emissions reduction from livestock (feed improvement, manure management/biogas).
- Strengthening capacity and capability on Monitoring, Reporting and Verification (MRV) process.

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Thank You

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