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Operationalising One Health

Green Recovery in the Greater Mekong subregion

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Operationalisation: The critical gap in One Health thinking

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- There are very clear conceptual understandings of the nature of One Health and the content of the interfaces between animal, human and environmental health
- There are strong rationales and business cases attached to One Health plans for which strong Cost-Benefit and Cost-Effectiveness cases have been made
- What is missing is an understanding of the institutional arrangements that can support the operationalization of One Health plans.
- The Nossal Institute has been working on a ‘business case’ for One Health for ADB that gives detailed consideration to operationalization questions

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‘Working together’ is at the core of operationalization issues

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‘Working together’ can mean a lot of different things

We are proposing the CCCI framework to clarify what is meant by ‘working together’ and consider what kinds of ‘working together’ might be appropriate for different kinds of One Health purpose.

- COMMUNICATION
- CO-ORDINATION
- COLLABORATION
- INTEGRATION

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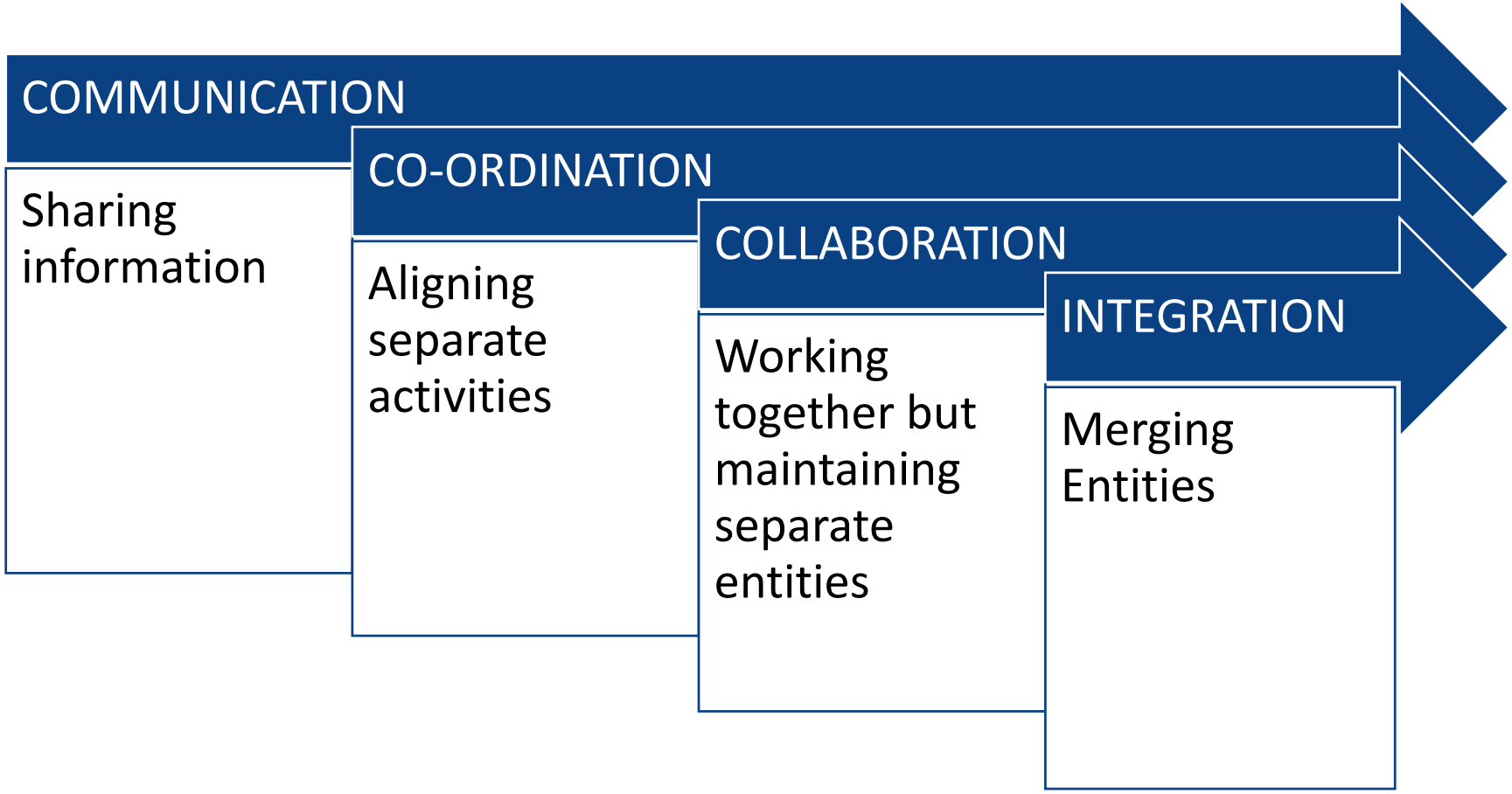
The CCCI framework

‘A spectrum of “joining up” for the purposes of One Health



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Where on the CCCI spectrum should a specific One Health activity locate?

Extent and distribution of specialist knowledge

- If specialist knowledge is high and concentrated, then greater levels of **integration will be more difficult**: each step will require greater levels of sharing such knowledge across parties

Timing considerations

- If activities have time specific impacts that interact with each other, then the benefits of greater levels of integration will be greater at least to the point of '**co-ordination**' – so that activities are timed to maximise their joint impact.

Externalities

- If externalities of the activities of one of the two parties affect the other, then the benefits from greater levels of integration will be greater at least to the point of '**collaboration**' – so that externalities are jointly managed to maximise the combined impact.

(Potential) economies of scope and joint production

- If there is significant scope for economies of scope and joint production, then the benefits from greater levels of integration will be greater up to the point of '**integration**' – so that activities maximise economies of scope and jointly produce outputs.

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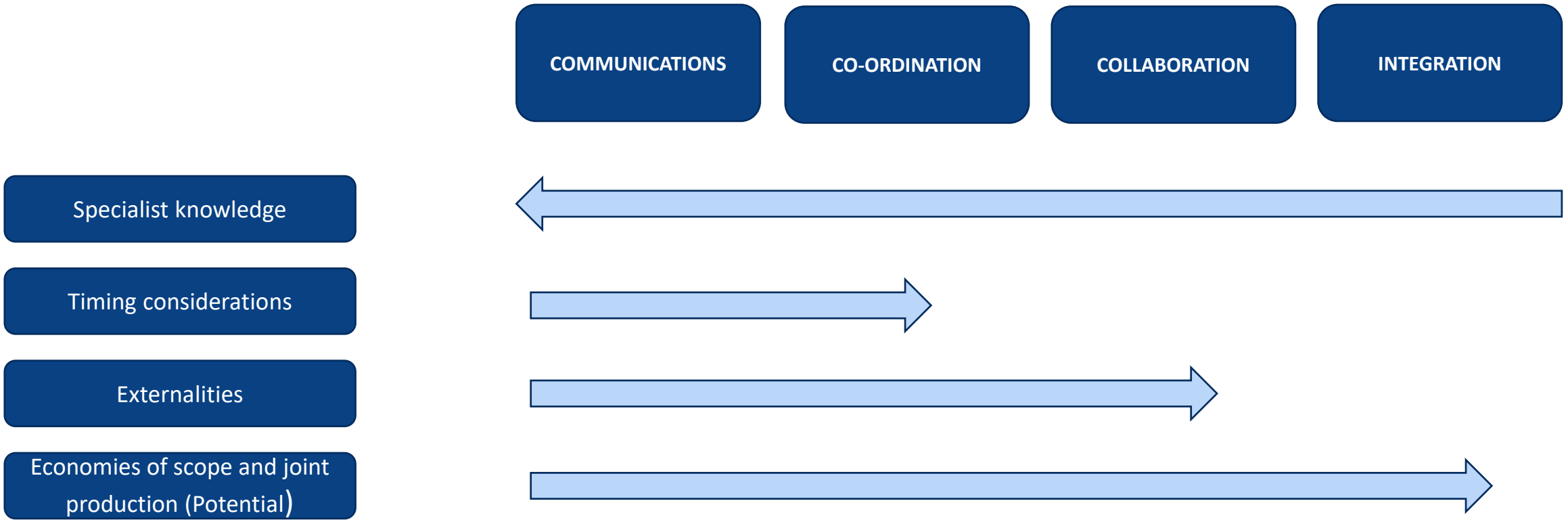

Applying the framework to the case of human and animal system joint working to reduce leptospirosis

Four considerations to provide clarity and focus

- Specialist knowledge
- Timing considerations
- Externalities
- Economies of scope and joint production (Potential)

Intervention	Specialist knowledge	Timing considerations	Externalities	Economies of scope and joint production
Vaccination of animals	High	Low relevance	High	Medium
Rodent control	Low	Medium	Medium	Low

Working through in terms of who should C, C C or I with what outcomes in mind

Further examples from Leptospirosis

1. Inefficiencies in resource allocation
2. Externalities: Public goods
3. Positive externalities
4. Economies of scope and joint production
5. Distributional considerations
6. Incentive Compatibility of Policies

Intervention	Type of One Health joint working	Value from joint working	One Health value of outcomes		Type of economic gain
			Direct	Indirect	
1. Sharing leptospirosis surveillance information between human and animal health sectors	*Communication*	**Major** value from • More efficient operations • Existing capacity & best practice shared across sectors • Greater cross-sectoral sensitivity and specificity of surveillance[30]	• More sensitive surveillance makes leptospirosis control more effective, leading to faster or more extensive reductions in disease incidence (**H, A**) [31]	• Greater sensitivity to detect emerging infectious (and other) diseases (**H, A, E**)	1 4

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1. Inefficiencies in resource allocation
2. Externalities: Public goods
3. Positive externalities
4. Economies of scope and joint production
5. Distributional considerations
6. Incentive Compatibility of Policies

Intervention	Type of One Health joint working	Value from joint working	One Health value of outcomes: Direct	One Health value of outcomes: Indirect	Type of economic gain
		of surveillance			
2. Laboratory diagnostic capacity shared between human and animal health sectors for leptospirosis diagnosis & surveillance	*Integration*	• **Major** value from shared laboratory capacity providing greater testing capacity at reduced overhead costs	• Improved access of livestock sector to diagnostic capability improves efficiency of animal treatments (**A**) • Linking surveillance to on-farm interventions (e.g. vaccination, rodent control, drainage) incentivises farmer participation	• Improved animal treatment reduces antimicrobial use & risk of antimicrobial resistance (**A**)	2 3 4 6
3. Cattle vaccination against leptospirosis	*Integration*	• **Moderate** potential efficiencies if implemented as part of existing livestock vaccination programs	• Reduced leptospirosis cases in humans, and improved livestock productivity and health leading to improved agricultural income and trade opportunities (**H, A**)	• Reduced antimicrobial use in livestock, and less antimicrobial contamination of animal products & resistance pressure (**A, H**) • Increased livestock productivity reduces pressure on land clearing, over-grazing, etc (**E**)	1 2 3 4

Next considerations for operationalization

WHERE WE ARE STARTING FROM

We understand the issues that drive the urgent need to take One Health approaches.

There are a range of estimates of the economic value of One Health approaches but many are based on rather heroic assumptions

There are more specific estimates of cost-effectiveness of interventions that fit a One Health frame

WHERE WE CAN GO NEXT

We can better understand the institutional arrangements that are going to be needed to support operationalization

Making choices about these arrangements will require qualitative judgements in context, but we believe the proposed framework is helpful

With proposed context specific institutional arrangements, we can improve more comprehensive economic value estimates

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Thank you