Pollinators Biodiversity & Services

July 7, 2016

Emergent JRS Strategy

JRS Biodiversity Foundation

What is this document?

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- This document shares ideas and seeks stakeholder input to the J.R.S. Biodiversity Foundation's emergent strategy for grantmaking to support biodiversity data and information services regarding pollinators and pollination services in sub-Saharan Africa. Please send comments or questions to ddoering@jrsbiodiversity.org.

Does this tell me exactly what JRS will fund in pollinators?

- **Absolutely not.** This only describes our general intent. We are still learning and want to hear from you. Our next call for proposals will be in January 2017 and will be shaped by your input. This document is only current as of July 2016, updates will be found at our website.

What happened to the Concept Notes you requested in January 2016?

- We received about 30 Concept Notes and these have been narrowed to 10 from which 1-2 will be invited to submit proposals near August 1, 2016. The remainder have informed the ideas presented here, have created a dialogue with the research and conservation community, and will be used to define the scope of our call for proposals in January 2017. Feedback will be provided to sponsors of the concept notes.

This seems confusing.

- Yes, transparency in decision-making and stakeholder input is messy at times. We're seeking input and testing ideas in order to serve you best and to advance the knowledge, capacity, and resources available for understanding pollinator status and conservation. Thank you for your input and for your patience.

What is our Strategy and Approach

GOAL: Our goal for the Pollinator Program is to increase the accessibility and quality of pollinator data through a long-term investment in collecting baseline data, developing technologies and methods to do so, and creating data sharing platforms relevant at regional and local levels.

STRATEGY: We are launching grantmaking initiatives in Pollinator Biodiversity Knowledge and in Applied Pollinator Biodiversity Informatics. We seek to support partnerships that advance pollinator data collection methods, shared data platforms, and plant-pollinator data standards. Applied pollinator informatics may include the data and technologies to inform the practice of more sustainable agriculture and to associate pollinator biodiversity data with human activity at local and regional scales.

APPROACH: We seek investments that build capacity in sub-Saharan Africa for the conservation of pollinators. We we will favor investments that have the greatest potential for widespread benefits, imitation or expansion, and sustained activity.

SCALE: The J.R.S. Biodiversity Foundation is a small donor. In 2016-2020, we may commit about US$3 million to pollinator biodiversity data and information services which may be only 15-20 grants over five years. However, our evolving priorities and the financial performance of our endowment may reduce or increase these estimates.

The IPBES report on Pollinators affirmed the rationale for our interest in pollinator biodiversity data and information services.

Critically important to humans and nature:

- 90% of flowering plants depend on pollination, 35% of crop volume, 5-8% of global crop value.
- Vast majority of pollinators are wild.

Decline in wild diversity and occurrence in Europe and North America.

Drivers: Land use change, agriculture, pollution, invasive species, pathogens, and climate change.

Strategies and Responses: Protect habitat diversity in natural and non-natural landscapes.

“Long-term international or national monitoring of both pollinators and pollination is urgently required to provide information on status and trends for most species and most parts of the world."

- IPBES

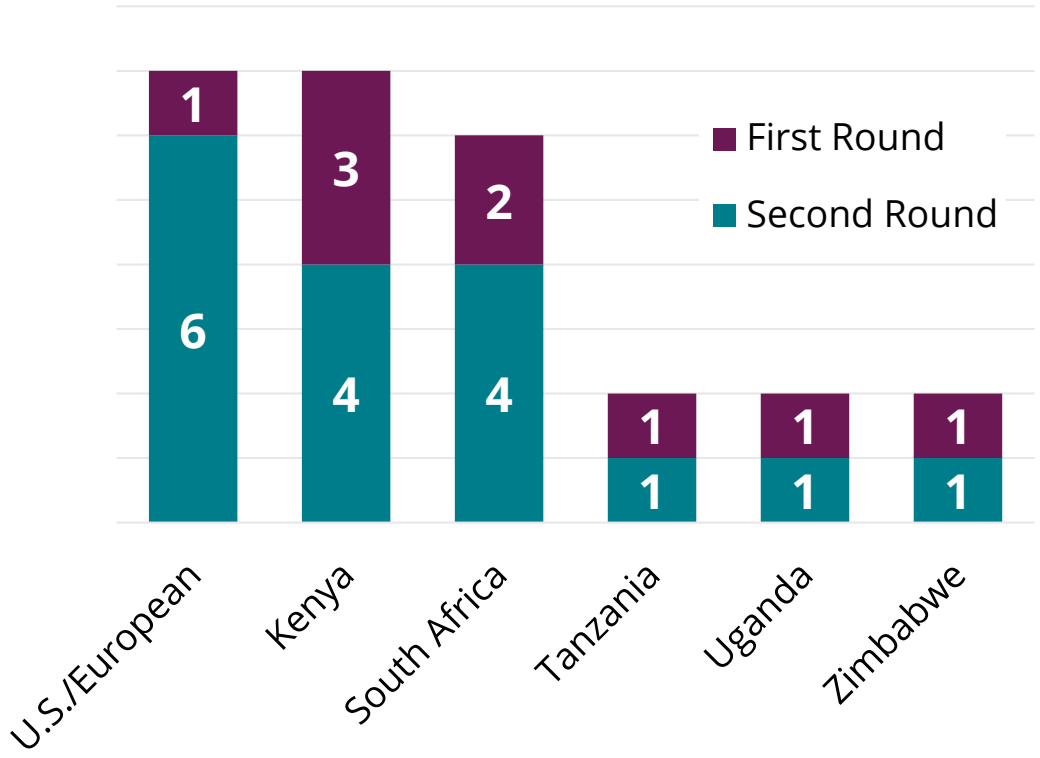
Some of the IPBES recommendations significantly rely upon improved data and information services.

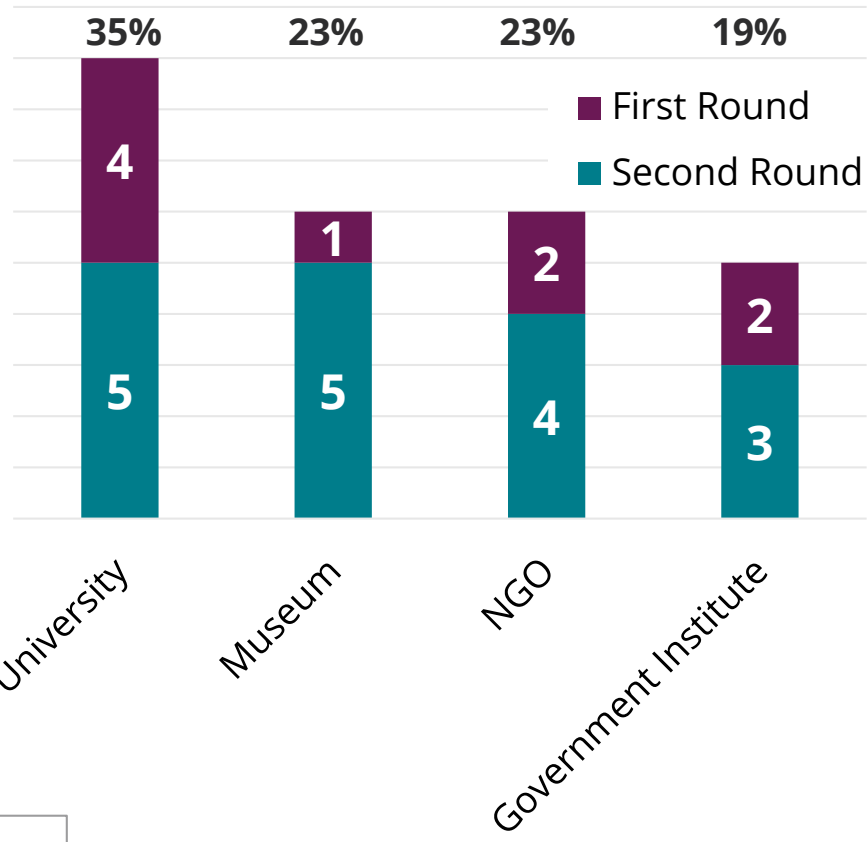
Transforming agricultural landscapes	**Ecologically intensify agriculture**	Monitor and evaluate pollination on farms
Transforming society's relationship with Nature	**Integrate knowledge and values into management**	Translate pollinator research into agricultural practices
	Link people and pollinators	Monitor pollinators (collaboration between farmers, the broader community and experts)
		Increase taxonomic expertise through education, training and technology
		Support high-level pollination initiatives and strategies
		Education and outreach programs
Improve/Maintain conditions for pollination	**Manage immediate risks risks**	Reward farmers for pollinator-friendly practices
		Inform farmers about pollination requirements
	Utilize immediate opportunities	Support product certification and livelihood approaches

Intergovernmental Platform on Biodiversity and Ecosystem Services: *Assessment Report on Pollinators, Pollination and Food Production*

Our call for Pollinator Biodiversity information project Concept Notes generated great ideas

Notes originated from universities, museums, NGOs and government





~30 Total Concept Notes

Average ~$125,000 for ~2.5 years of funding.

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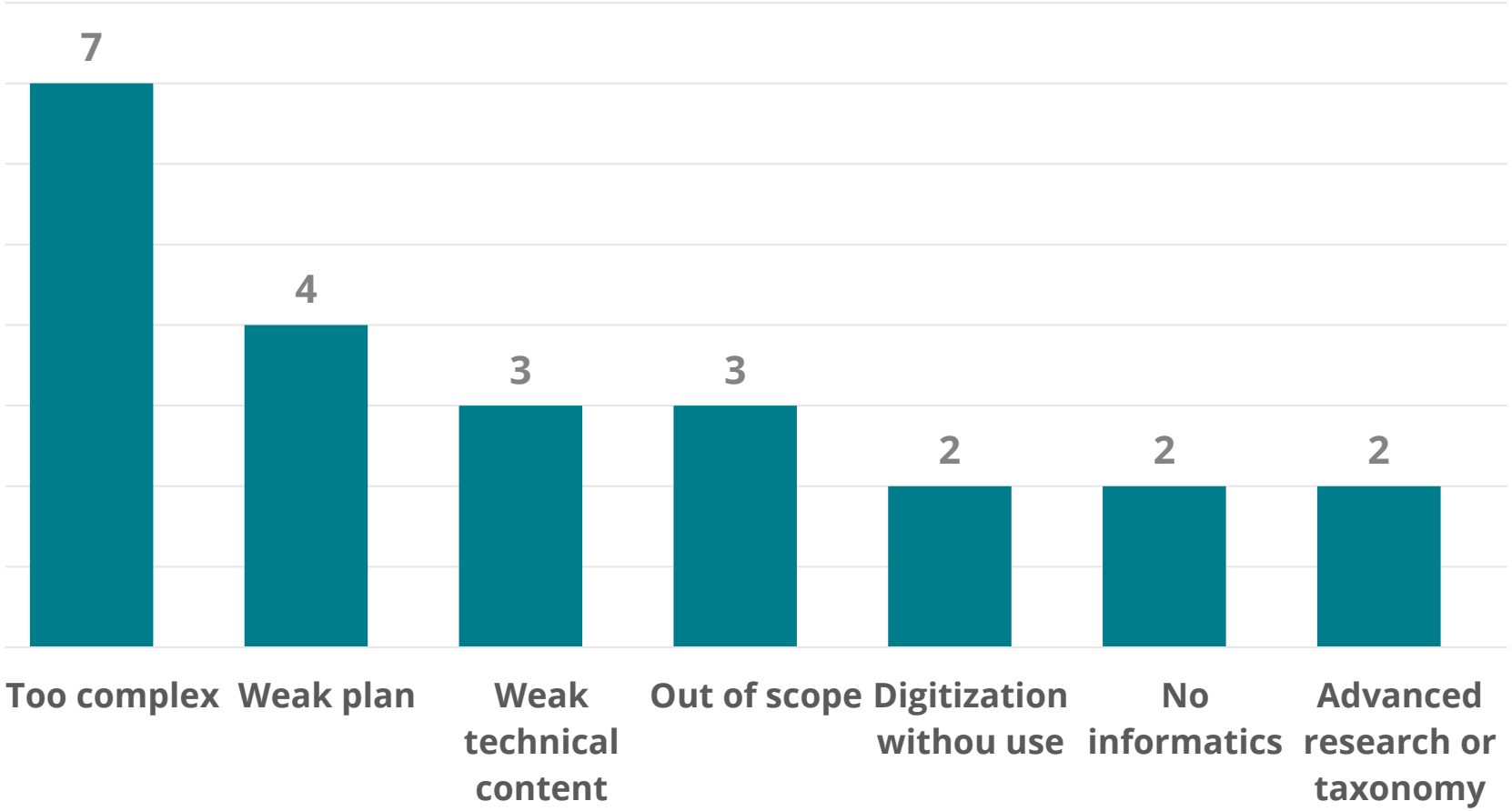
JRS reviewed and selected concept notes that were then reviewed by external reviewers

Reasons for declining to pursue ideas were varied



External Review Critiques

- Quality was weak
- Supply-driven
- Ambivalence about bees.
- Weak in capacity building.
- Low confidence in application of data
- Too focused on data collection
- Balancing narrow vs. broad
- A preference for local projects

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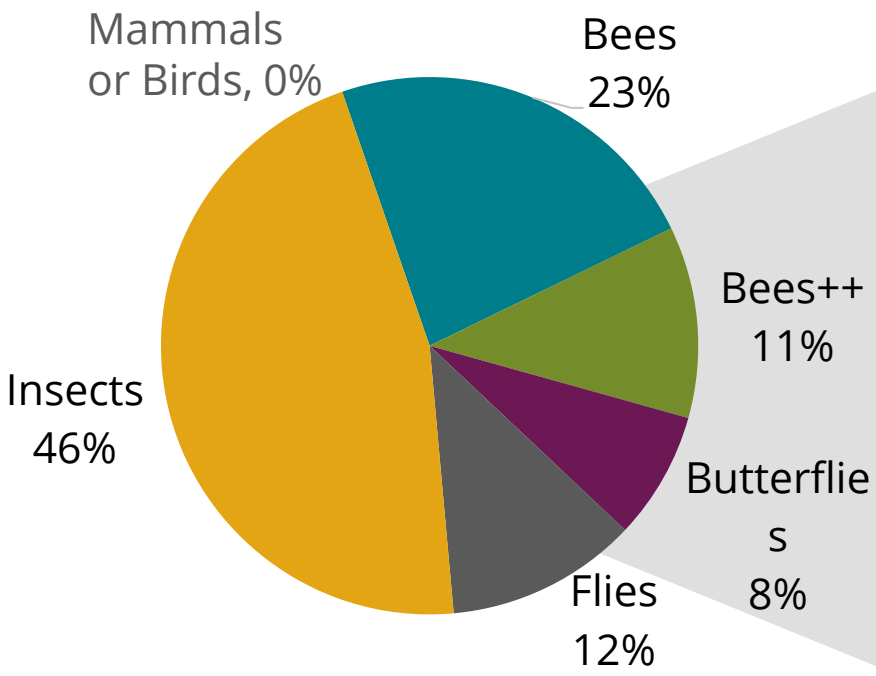
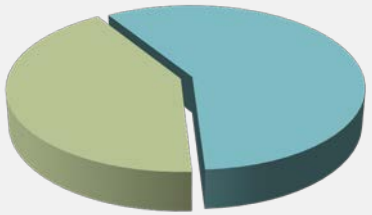
Concept Note Focus





58% Eastern Africa
42% Southern Africa
(We did not invite West African projects)

Concept Notes adhered to well recognized problems, e.g. inadequate:

- Expertise
- Data
- Information resources
- Outreach
- Assessment of threats

And to solutions anticipated in our strategy.

- Mobilizing existing data.
- Rapid, large-scale field methods.
- Baseline surveys.
- Taxonomic tools.
- Core databases, resources.

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What *Purposes* motivated the project ideas?

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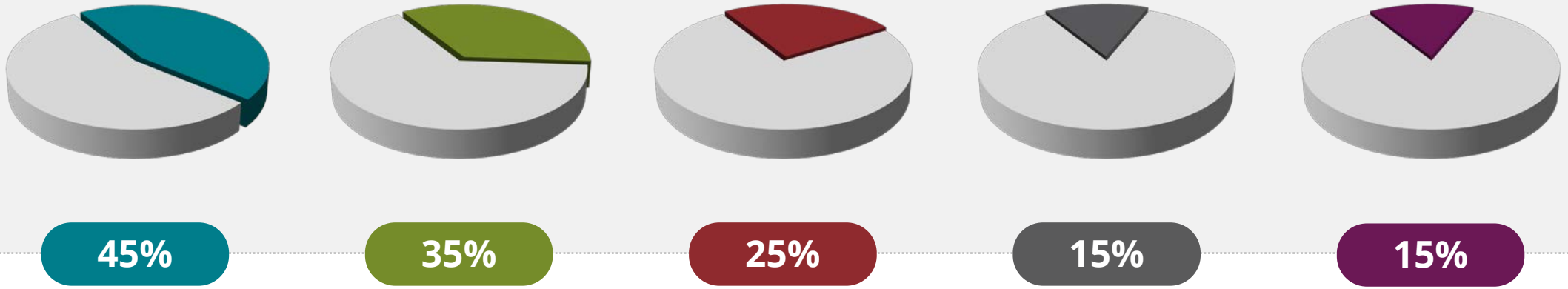
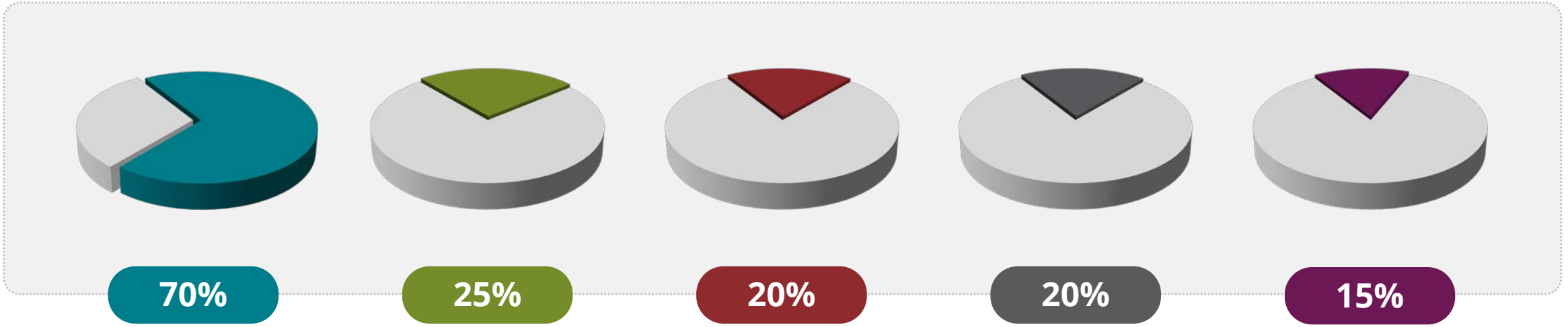


45%	35%	25%	15%	15%
Fill Knowledge Gaps	**Improve Crop Productivity**	**Landscape Level Data**	**Plant-Pollinator Data**	**Awareness Raising**

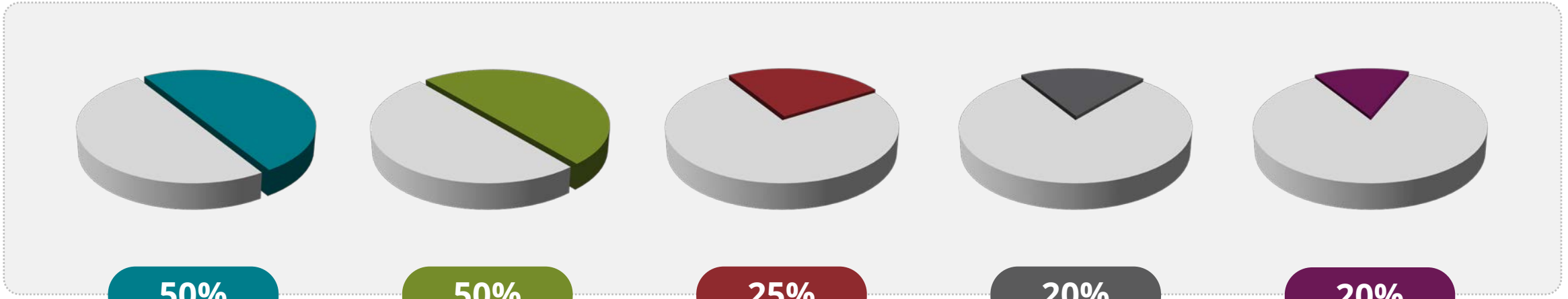
- **Others:** Data Sharing Platforms for Pollinators, Large Scale Data Collection, Building Research Capacity, Taxonomic Identification

What *Approaches* are common to the project ideas?



- **Others:** Identification Keys, DNA Barcoding, Pollinator Database Development, Taxonomy Training, Species-specific databases, Citizen/Farmer Data Collection

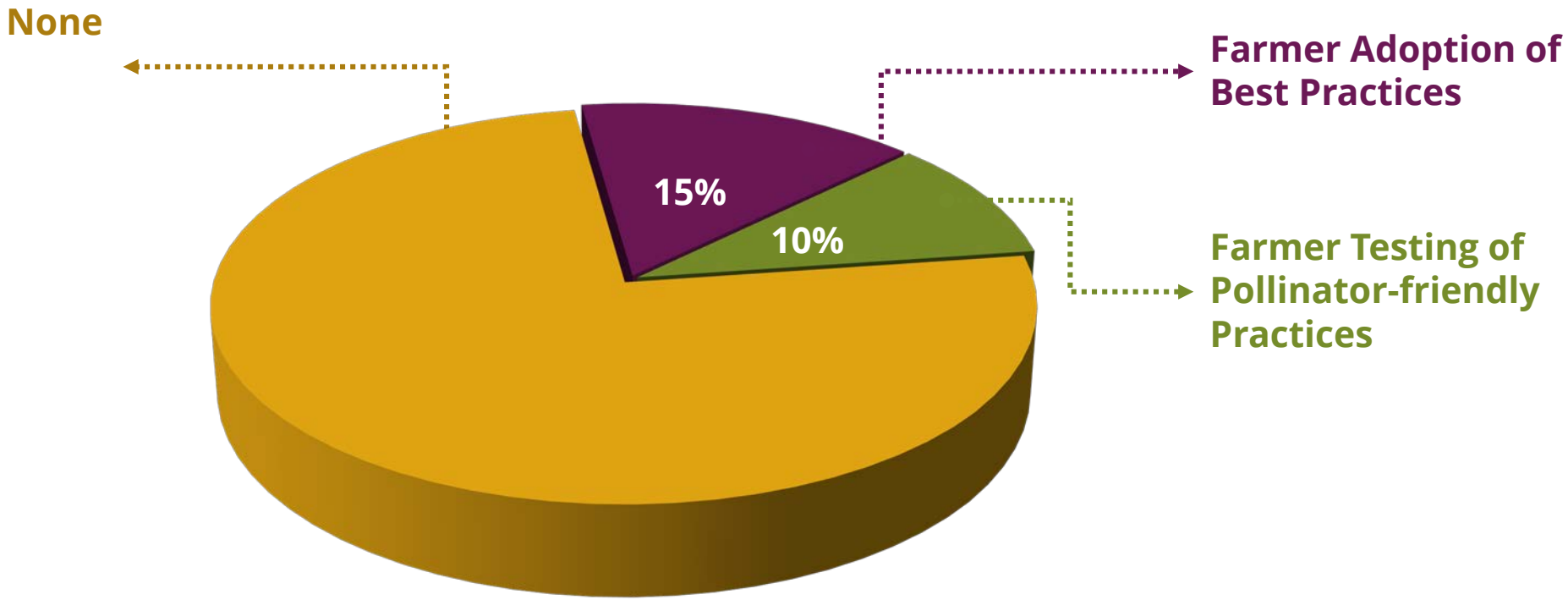
What *Outputs* are most common to the project ideas?



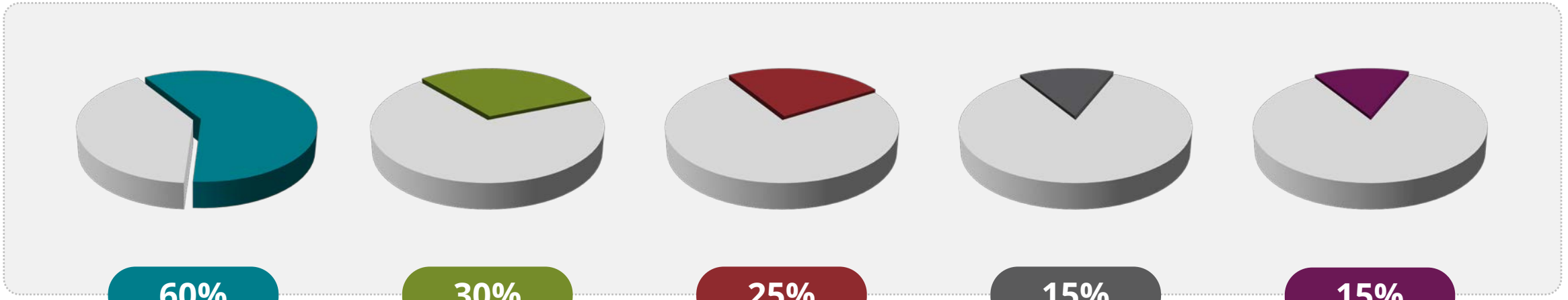
- **Others:** DNA Barcodes, Hard Copy Field Guides, Pollinator Checklists, Voucher Specimens, Baselines, Farmer Training, Distribution Maps

What *applications* of data are included?

Over 75% of applications do not feature any application of biodiversity data other than for reports, publications, and non-targeted awareness raising.



What *capacity building* is specifically mentioned?



- **Others:** Field survey training, database training, student education, network formation

What are apparent Strategic Opportunities for JRS to have the broadest benefit to knowledge of and conservation of pollinators?

Methods 	• Approaches for large scale/low cost pollinator data collection. • Methods for pollinator identification. • Methodology, standards, and database design for plant-pollinator data.
Platforms 	• Develop ‘generic’ database and website models. • Develop 1-2 Pollinator Knowledge Platforms. • Sharing field guides and online guides/checklists.
Capacity 	• Reference baseline datasets. • High quality biodiversity data components for agricultural studies. • Network formation and capacity building.

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Many strategic questions will be informed by engaging with stakeholders and through future grantmaking.

- How do we design projects and partnerships to bridge knowledge gaps among the informatics, conservation, and agriculture communities regarding each others' domains?
- What species focus could promote a critical mass of useful data?
- How do we avoid duplication of effort for building databases and knowledge portals, yet also promote diverse approaches and hedge our bets?
- How do we reduce the costs, required expertise, and time for pollinator data collection and sharing (including plant-pollinator data)?
- In which countries do we focus our grantmaking to assemble networks of partners and significant results that might advance knowledge, policy and practice?
- What capacity-building efforts might have the highest leverage and might build African leaders and institutions?
- What technical tools might have the broadest impacts to the generation, sharing, synthesis, and use of pollinator biodiversity information?
- What outcomes might result from supporting conferences on pollinator biodiversity in sub-Saharan Africa?

Next Steps

- JRS will invite 1-2 sponsors of the Concept Notes to submit grant applications for approval in October/November 2016.
- Feedback will be given to the ~30 sponsors of concept notes before the end of 2016.
- Stakeholder input to the emergent strategy and consideration of the Concept Notes will be used to refine our pollinator strategy.
- A request for proposals will be designed to issue in January 2017.
- Webinars will be held after the request for proposals is issued in order to provide guidance to interested applicants.

Questions or ideas? Please write to ddoering@jrsbiodiversity.org