

Communicating the Science: Writing

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- Audience and what they need
- General considerations

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- Writing scientific articles

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- Examples

Section IV:

- Give it a try

Who is your audience? (1)

- Donors
- Policymakers/decisionmakers
- Partners
- Stakeholders/farmers
- Scientists/ researchers
- Private sector
- Media
- General public

What do they need?

- Statistics
- Data
- Facts
- Methods/ how to
- Recommendations
- Context
- Stories
- Examples
- Quotes

Who is your audience? (2)

Audience

- Donors
- Policymakers
- Partners
- Stakeholders/ farmers
- Media
- Scientists/ Researchers
- General public
- Private sector

What they need

- Statistics
- Data
- Facts
- Recommendations
- Methods
- Context
- Stories
- Examples
- Quotes

E.g., What do donors/ policymakers want to see?

- Impacts
- Statistics/data
- Beautiful pictures, especially end users
- Stories of real people (as box, inset, illustration)
- Convincing quotes
- Compelling recommendations
- Something new to think about

Formats

- Brochures
- Pamphlet
- Flyers
- 1-pager
- Fact sheet
- Story
- Press release
- Scientific article
- Video
- Power point
- Blog entry

What do you want to share?

General considerations

- Context?
- What are we trying to do?
- What is different about this approach?
(originality)
- What is significant about this approach?
(significance)

What do you want to share?

General considerations

- Why does it matter? What is this adding to the science, world? (relevance)
- What are the expected outcomes, impacts?
- Where does it lead? (applicability)
- What is left to do?



Communicating the Science

Scientific article or
report



For a formal article

Outline

- Abstract
- Intro: Context and Hypothesis
- Background (lit review)
- Methodology
- Findings
- Analysis
- Implications/ conclusions



Abstract

- Clear, compelling, brief
- May have to stand alone
- 1-2 sentences for each section of the article noted above
- 200-300 words
- May not reveal the recommendations or implications (not a summary)
- Write it last



Introduction

Answer the questions

- *What was I studying?*
- *Why was it an important question?*
- *What did we know about it before I did this study?*
- *How will this study advance our knowledge ?*



Structure of the Intro

Inverted triangle from the most
general information focusing
down to the specific
problem you
studied



Intro: Context

- Where?
- What? Nature and size of core problem.
- How does it fit in a broader context, set of goals or objectives?
- Implications for other contexts?
- Backed up with statistics, literature, previous work at CIP/partners



Intro: Hypothesis

- Approach and assumptions
- What is new, different? New approach, or older approach in new context?
- Expected outcomes



Background

Literature review – here's what's known/been found so far

- Particularly those aspects closest to your activity, research
- Or similar themes from a different context if part of the reason for your research is the lack of prior research/literature
- Bringing together of multiple approaches from different sectors; e.g. gender; health and agriculture...



Methodology

- Clearly detail design, procedures
- Highlight any unique features or reasons to apply this methodology
- Must be replicable: Be sure to describe data gathering and analysis



Findings

- Objectively present key results, without interpretation
- Use orderly, logical sequence
- Use charts, tables, and illustrations
- Organize the information around the illustrations
- Report negative findings, too
- Use past tense

Example: findings

- The duration of exposure to running water had a pronounced effect on cumulative seed germination percentages (Fig. 2). Seeds exposed to the 2-day treatment had the highest cumulative germination (84%), 1.25 times that of the 12-h or 5-day groups and 4 times that of controls.



Discussion/Analysis

- Interpretation of your results
- Compare to what was already known
- Explain our new understanding of the issue/problem in light of your results

Discussion/analysis

- How do your findings answer your hypothesis?
- Do your findings agree with what others have shown?
- If not, do they suggest an alternative explanation? New direction? Design flaw?
- What new understanding did they bring regarding the problem you investigated



Conclusions

- Implications of this study
- Recommendations
- Future investigations or questions



Communicating the Science Stories



Why tell stories?

- Because people remember them
- They are engaging
- Can be a simplified way to describe complex issues
- Easy to use, re-use, and disseminate
- They work for different types of audiences

What is different about writing stories?

- Same information?
- Audience
- Emphasis
- Order
- Examples and illustrations
- Packaging and dissemination

How to approach telling a story

Content still includes:

- Background/ context
- What you are trying to do
- Why it is important
- What is happening (findings)
- Why it matters (discussion, implications, impacts)



Things to think about

- Emphasis on IMPACTS
- Highlight issues that grab attention within a broader story – e.g., what's new or surprising
- Lessons from explosion of social media



What is different?

Tone

- More conversational. Imagine you are talking, explaining something to someone

Language

- “plain language”
- Not dumbed down
- Avoid or explain/define complex or scientific terminology

What is different?

Emphasis

- On people or issue
- On “take home lessons”/ impacts
- On recommendations

Order

- Bring most important findings/impact to the front! Invert the triangle a little.
- Highlight surprise element, “aha” or “so what” element



Formats

- One pagers: short, concise, easy to copy and use
- Stories: using power point, “boxes”, video
- Brochures, easy and eyecatching, but harder to download
- Downloadable video, power point, or webinar



What is different?

Format/layout

- Eyecatching and visual
- Use illustrations (photos, graphs)
- Use quotes
- Insert real person or story
- Can I read it on the way to the meeting?

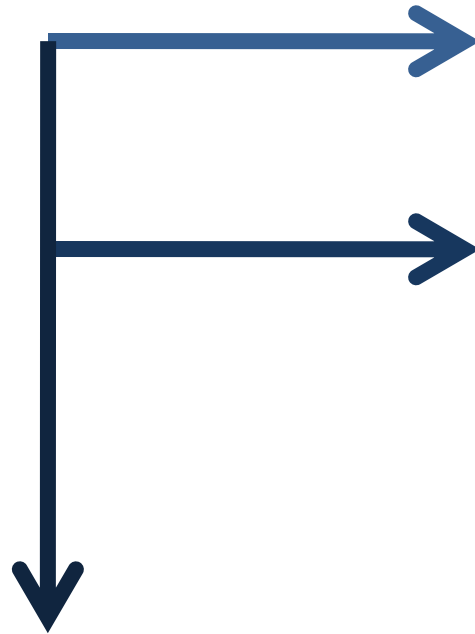


How to get started?

- Outline – know that you will likely change the order later
- Key messages/points
- Illustrations
- Anecdotes, real case story, quotes to bring home the point. E.g.: “now I have enough money to buy the supplies my children need for school”

Learn from the way we need to write for social media/ Web

- People don't read Web pages, they scan them



Writing for the Web

- Readers don't like to scroll
- PRIME REAL ESTATE is the size of a laptop screen
- Reading from computer screens is about **25% slower** than reading from paper
- It's **not comfortable** to read long blocks of text
- Be **succinct**: write half the text you would use in hard copy

Writing for the Web

- Get to the **point**
- Use **hypertext** to split up long information into multiple pages
- Use **visuals**, especially beautiful photos or quotes
- Use **highlighting and emphasis**

Writing for the Web: Content

- Put conclusions first
- Snappy titles
- Succinct - one idea per paragraph
- Active voice is best, with exceptions
- Short sentences
- Use lists, limited to 7 items at most
- Use subheadings
- Use links

Writing for the Web: Titles

- Most important words first
- Need to attract the reader and encourage him/her to read
- Should be able to stand alone
- Use subtitle if you need to say more
- Search engines will pick up the words of your title



Samples

Resistant varieties make the difference between having enough to eat – or not



Following devastating rains and an increased presence of late blight disease in 2010, the food security of communities in the Paucartambo province of Peru was ensured thanks to two CIP-developed late blight resistant potato varieties, called Pallas Poncho and Puka Lliclla.

“Three years after their formal release, the yield of these two potatoes was about 8-times higher than any of the 150 native potato varieties grown by these communities,” explains Stef de Haan, CIP potato breeder, adding “it made the difference between having enough to eat or not.”

CIP Success Story – Ecuador

Impact on Public Policy Change

Following 15 years of CIP research and policy efforts, Ecuador banned the fabrication, formulation, importation, commercialization, or use of highly toxic (class 1a & 1b) pesticides.

Potato farmers in Ecuador are some of the country's biggest consumers of pesticides, with high direct exposure.

CIP and partners provided the scientific evidence of the negative health, environmental, and production impacts of these pesticides; conducted capacity strengthening with farmers for safer pesticide use and integrated crop management; and conducted policy analyses for recommended policy changes.

The policy work helped foment debates in Ecuador and in the international community regarding the dangers associated with the use of these pesticides, particularly for poor rural families.



Vitamin gardens give health and independence



Fatiba is 30 years old and she has 3 young children. She manages the family, grows the crops, cooks the meals, and sells produce in the market. She has been learning new farming techniques at the model garden center supported by Helen Keller International. She describes the importance of eating fresh produce, the impact of drip irrigation and mulch for extending the scarce water, and the nutritional value of the orange sweet potato.

"The orange sweet potato has Vitamin A. Our white sweet potato does not. I want my family to eat the orange one to make them healthier." Vitamin A deficiency is a leading cause of preventable blindness and death in children around the world. Fatiba is taking steps to make sure her children and community are spared this problem.

For Fatiba the garden also means independence. Not only can her family have fresh vegetables every day for the first time ever but the excess produce brings in money that is liberating.

CIP Success Story- Papua Indonesia

Impacts not just financial

Positive project impacts reach beyond economic gains to also include broader impacts on human capital and on social, physical, and natural livelihood assets.

A Sustainable Livelihood framework evaluation showed multiple positive impacts from a CIP project using sweetpotato to improve pig production in Papua, Indonesia.

“This project has helped us improve our family livelihoods. Now we always have enough food to eat, and more importantly we can send our children to study in universities. We never dreamed that we will soon have two Bachelor degree holders in our house.” – project participants Mr and Mrs Elopere



Livelihood assets impact in Papua Indonesia

- **natural:** improved sweetpotato genetic diversity, higher yields, more crop production efficiency, improved resistance to environmental stress, reduced dependence on natural resource products for income
- **physical:** improved pigsty technology
- **human:** improvements in education and sweet-potato pig husbandry skills
- **social:** improved social cohesion through the formation of community organizations
- **financial:** enhanced sweetpotato and pig production capacity and cash income

CIP Success Story- Kenya

Impact on farmers' livelihoods

Lack of high-quality seed potato is a major bottleneck in potato productivity, and its low multiplication rate drives up the cost of available seed potato.

CIP's 3G project is working with the Kenyan Plant Health Inspectorate Service (KEPHIS) and several private companies to increase seed potato availability and affordability for smallholder farmers.

The 3G seed strategy is producing large numbers of minitubers through very rapid multiplication to yield sufficient, high quality seed in 3 generations instead of the normal 7.

With the project, national capacity to produce basic seed potato grew from 10,000-30,000 in 2009 to 426,000 in 2010.



Farmer Patrick Wamae of Githongo Village purchased two 5 kg packs of seed in April this year. "The product has performed beyond our expectations, and we expect to get a harvest of over 200 kg. We will sell half of the harvest while saving seed for planting on a larger area. My neighbors have been coming to inquire about the product, and I intend to sell seed to some of them."

CIP Success Story- China

Impact on disaster response and rebuilding



In May 2008, a 7.9-magnitude earthquake devastated southern China. Along with massive human casualties, the quake wiped out 10,000 hectares of potato fields and most of the crop's production facilities in Sichuan, the country's largest potato producing region.


Within months, CIP was leading a collaboration to rebuild and enhance potato production in the region. The program introduced high quality seed, with better yields and greater resistance to late blight disease. It also introduced new technologies to support more rapid multiplication of "seed" tubers for planting. And it provided training to improve disease detection and storage.

By 2009, 30 million minitubers (for seed) had been produced in the province, compared to only 6 million before the earthquake.



WRITING STORIES

GIVE IT A TRY...

- 
- Start by talking it out with someone
 - What is main point to relay?
 - Context, what are we doing, what's different about this approach, why does it matter, how will it help/reach end users?