

Lecture note

Technical reporting

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by

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Lecture notes have been prepared on the following topics:

Aggregate water balances for basinwide planning

Case study: Kok River Basin

Case study: Lower Mekong Basin

Environmental management

Floods and drought

Glossary

Good governance strategies (example from Thailand)

Internet applications in river basin management

Paddy cultivation

Poverty alleviation

Project design

Public administration

Ramayana

Reporting

River basin ethics

River basin management

Sector planning and integrated planning

Socio-economics

Strategies for natural resources and environmental management (example from Thailand)

Technology management

UTM coordinates

Water demand management

Water resource economics

Water user associations

Each note is intended as a quick introduction of a subject prepared for professional practitioners who are specialists in other subjects.

The notes are 'public domain' and can be freely copied.

Suggestions and comments are most welcome!

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Glossary

Acknowledgement: A short expression of gratitude and recognition of persons or organizations who have supported the work in some way

Acronym: A name made of initials - for example ADB, ASEAN, UNDP

Administrative reports: Inception report, progress reports/status reports, and other documents describing the management, progress, resource utilization, and various administrative implications and practicalities

Cliché: An overused word or expression; to be avoided. Example: The ~~devastating~~ floods

Consistent (terminology or approach or logics): Uniform; fitting with each other; unchanged over time; unchanged from one chapter to another, or from one report to another

Derogatory (or pejorative): Expressing disapproval or disrespect. Example: Oysterbrain

Disclaimer: A short statement that a document does not necessarily reflect the official opinions of the organisation that has commissioned the work (and/or paid for it, and/or published it)

Discussion paper: A provisional document, which mainly serves the purpose of communication in the course of a project. Often, it will present ideas and suggestions, or internal recommendations. A Discussion Paper can be '*upgraded*' to a Working Paper if so desired. A Discussion Paper is normally not reviewed by anyone except the author(s), so it can be circulated without formal review and endorsement

Documents: Can be printed or electronic; can comprise various types of reports, papers, letters, memos, and e-mails, as well as overhead handouts

Guideline: A clear explanation of how to do, and a tool for coordination of the work. It can contain detailed step-by-step procedures; and/or check lists; and/or conceptual outlines of aspects to consider and aspects to disregard. The consistency of data and analysis can be supported by the use of guidelines

Jargon (professional slang): Words or expressions used by a specific profession or group, and not readily understood by others; to be avoided (or explained). Example: *Gobbledegook* (used by journalists to express meaningless language) (the word reflects a turkey's gobble)

Pleonasm: An unnecessary word (or sentence) - such as ~~past~~ experience - ~~perfectly~~ clear - ~~resulting~~ effect

Position paper: A technical progress report, normally serving the purpose of communication during the work, often for a specific purpose, and often confined to one subject

Qualifier: A word bending the significance of an other word, for example '*highly*', '*very*', ... Skip wherever possible

Qualification: A moderation of a statement, used for communicating a less than perfect accuracy or validity. Examples: '*The data are incomplete but indicate that ...*'; '*During this survey, it was seen that*'

Quality: The compliance between an *actual* and a *specified or desired* property (or set of properties) (for example the actual contents of a report as compared with the specified or desired contents)

Redundant (words or paragraphs or even chapters): Unnecessary - for example a duplication (literal or logical); or not required in the context; or not required for the purpose of the document

Technical report: A document that describes one or several outputs (or results) of a study

Slang: Informal expression, often used in a specific cultural environment; can cause misunderstandings if used outside its original context. '*Lingo*' is a slang word for '*slang*'

Verbosity (or circumlocution): Using more words than necessary; to be avoided. Example: ~~*The new invention was the first of its kind.*~~ (In this example the entire sentence can be skipped)

Weasel words: An empty substantiation or qualification of a statement. (Hereby, the statement will resemble an apparently intact but empty shell of an egg sucked by a weasel). To be avoided. Example: '*There is some reason to believe that ...*'

Working paper: An internal and, sometimes, provisional document, which mainly serves the purpose of communication during the work. It can present summary descriptions of '*facts*', or open ideas and suggestions, or recommendations. It is often monographic (confined to one subject)

1 Introduction

A report communicates some information from the author to the reader. It is often prepared by somebody with a special insight and qualifications, in response to a request.

A good report (a) is submitted on time; (b) conforms with the specifications (contains what it is supposed to); (c) is easy to understand; and (d) is credible, by using a logical and transparent rationale and analysis, and by provision of suitable substantiation and documentation.

These quality criteria are related not only to the contents of the report, but also to its appearance. Which is what the present note is about!

2 From the writer to the reader

The report can communicate

- a. *a context*: Why the report was produced; and what it can be used for; and relations to other previous, parallel or future work;
- b. *a substance*: Answers to questions raised, recommendations, key assumptions, synthesis of supporting analyses, observations, suggestions, or open thoughts; and
- c. *a basis*: The data/information that has been produced and applied, and details about assumptions made during the analysis and synthesis

If the substance is some knowledge, it must be explained when and how to use the knowledge. This is because most knowledge is imperfect, so it should be used with caution, and within its range of validity.

3 Problem formulation

The problem formulation reflects the purpose of the work behind the report. A clear and relevant problem formulation is a particular quality. It can be introduced in the title of the report and kept in the top of the mind throughout the text. A vague problem formulation causes waste of the reader's time - and particularly so if, after having read the report, one remains in doubt about why it was prepared in the first place.

If the problem formulation is not clear at the start of the work, some effort may be spent on making it more specific. This can conveniently be done in a dialogue with the one who has initiated the work.

<i>Problem formulation - general example</i>	<i>Problem formulation - specific example</i>
Strategy for a development initiative	Serving the needs of the next generation - design of a new education programme
Predicted implications of some enterprise	An attractive opportunity - value, resource requirements, and long-term viability of a new education programme
Lessons learned, and scope for improvement	The way ahead - 5 ways to re-vitalize an old education programme

4 The message

The aim of a clear message is supported by

- (i) a good title;
- (ii) a clear summary '*up front*';
- (iii) a logical structure of the report (including chapter and section headers), reflecting a suitable rationale; and
- (iv) a clear distinction between the basis for the work and the work itself.

'Sexy' titles can attract the reader's attention to your report

Death in small doses – Cambodia's pesticides problems and solutions
(by Environmental Justice Foundation, London, UK, 2002)

Producing more rice with less water
(by L. C. Guerra et al., IWMI, Colombo 1998)

Could Cambodia's farmers be rich?
(by Finance and Banking Commission and Economic Institute of Cambodia, January 2004)

Example: 'Virtual water'

The term '*virtual water*' was coined at a seminar ... in about 1993. ... Before 1993 the author had used the term '*embedded water*', which did not capture the attention of the water managing community. ... The term '*embedded water*' was under-whelming in its impact. '*Virtual water*', by contrast, had an immediate impact. It was accessible and people appeared to accept it readily as a useful metaphor.

Quoted from J.A. (Tony) Allan: *Virtual water - the water, food, and trade nexus. Useful concept or misleading metaphor?* IWRA, Water International, Volume 28, Number 1, March 2003, p. 4

5 Information categories

Assumptions should not be mistaken for findings or recommendations - and important new knowledge should not be mixed up with trivial textbook stuff. Different categories of information should be clearly identified to the reader:

- Assumptions
- general professional information, for example from textbooks
- data, information and analyses from literature or from other sources
- data and information produced for the present purpose
- analyses made for the present purpose
- objective recommendations based on rational analysis and clear criteria
- subjective suggestions based on personal opinions, arbitrary judgements, or inadequate data

Sometimes, these different categories can simply be presented in separate chapters (or annexes) with clear introductory explanations.

6 Assumptions and reservations

In order to avoid misunderstandings, it is important to communicate key assumptions and reservations together with the findings. *Assumptions that are trivial to the author may well be overlooked by the reader.* This can cause serious misunderstandings. Examples:

- *'When estimating the benefits of the reservoir, it has been assumed that the price of rice does not drop below today's level, and that no additional trade barriers will be imposed'*
- *'The impact assessment of the reservoir does not include structural failure of the dam. It has been assumed that operation takes place with due diligence and according to appropriate operation rules'*
- *'The location of the reservoir has been specified beforehand as a basis for the work, and no alternative locations have been considered'*

This is partly with a view to the distribution of liability, but also very much a basic question of good communication.

7 Crisp reporting

Decision-makers are important people with little time to read lengthy reports. The shorter the text, the higher the impact.

Consider a separate itemised list of *'findings and recommendations'*, together with key assumptions and reservations.

Include a summary if the text is more than a few pages. Make sure that it is self-explanatory. If you don't make it yourself it will be made by someone with less insight in your work.

Use figures, maps, tables, photos and text boxes as much as body text. Make sure that they are self-explanatory.

8 Language

Avoid cross-references unless they are imperative.

Avoid *'qualifiers'* - they make the text heavy to read - for example, you would need to use the word *'very'* a few times in your life only - write *'big'* or *'important'* instead of *'very big'* or *'very important'*.

Be careful with abbreviations - e.g.¹, not all readers are familiar with Latin! :-)

Explain acronyms the first time they appear in the text: ADB (Asian Development Bank).

¹ e.g. = *exempli gratia*, = for example

If you want to know more ...

... please enjoy *The Economist's Style Guide*, available on the Internet - or as a book.

Also, The Times has an online style guide, where you can learn things that you had no idea you didn't know about the English language.

Use both of them with caution. They are not entirely compatible, and they do not always comply with the Oxford Dictionary. Furthermore, they are sometimes slightly out of tune with contemporary international English. The language evolves quite rapidly, and expressions that were banned a few years ago can be perfectly acceptable today - or the other way around.

The Economist's Style Guide - examples

The Economist Style Guide by John Grimond, downloaded from <http://www.economist.com/research/styleGuide/>

Clarity of writing usually follows clarity of thought. So think what you want to say, then say it as simply as possible.

Short words: Use them. They are easy to spell and easy to understand.

Unnecessary words: Some words add nothing but length to your prose. Use adjectives to make your meaning more precise and be cautious of those you find yourself using to make it more emphatic. The word *very* is a case in point. If it occurs in a sentence you have written, try leaving it out and see whether the meaning is changed.

Active, not passive: Be direct. *A hit B* describes the event more concisely than *B was hit by A*.

Syntax: Letter to the editor: *'During my many years as a reader of your newspaper, I have distilled two lessons about the use of our language. Firstly, it is usually easier to write a double negative than it is to interpret it. Secondly, unless the description of an event which is considered to be not without consequence includes a double or higher-order negative, then it cannot be disproven that the writer has neglected to eliminate other interpretations of the event which are not satisfactory in light of other possibly not unrelated events which might not have occurred at all.'*

The Times s Style Guide - examples

Style Guide from Times Online December 15, 2005, downloaded from http://www.timesonline.co.uk/tol/tools_and_services/specials/style_guide/

adjectives avoid cliché adjectives as in long-felt want, serious danger, widespread concern, substantial majority etc

ever is rarely necessary; avoid phrases such as best-ever, fastest-ever, and say simply best and fastest, qualifying (where appropriate) with yet

in fact can almost invariably be omitted

in order to simply wastes two words. Delete "in order"

interesting avoid as an adjective in text; let the reader decide

possibly like most qualifiers, this word can (usually) be omitted

research shows... in many cases it does not. Like most polls, it merely indicates, suggests, hints at, implies... so beware

very one of the most overworked words in English. Always try to do without it

Appendix A: Guideline for writing a report

Contents, as relevant from case to case:

- a Cover: Title; prepared by whom; prepared for whom; date; type of document (for example proposal, project document, discussion paper, progress report, working paper, guideline);
- b Title page: As cover, + perhaps additional information: Contact persons and addresses; status (for example 1st draft, final draft, final); and a disclaimer²
- c A list of updates since the first version of the report
- d A key map
- e List of acronyms and abbreviations
- f List of contents
- g A summary (if the report is more than a few pages)
- h Introduction, normally including a description of background, context, purpose and origin of the document, and perhaps with an acknowledgement
- i The text itself, divided into chapters and sections
- j References and related literature
- k Appendices - possibly including a glossary

Illustrations and figures

- Use figures, diagrams, photos, maps, text boxes, as much as body text
- Numbers: Don't use more digits than justified by the applied accuracy and resolution. Values should be rounded to the number of significant digits - for example '*around 5 percent*' - rather than '*around 4.973 percent*'
- Scales: Always indicate the unit. Avoid unnecessary decimals (write '*0 - 1 - 2 - ...*' rather than '*0.0 - 1.0 - 2.0 ...*').

² Example of disclaimer: This document has been prepared for internal use within the project. It presents opinions of the author(s) and not those of the Client

Appendix B: Check list for review of a report

The title: Correct, informative, appropriate

Structure of document: Clear, logical

Compliance with specifications (ToR, if available); justification for deviations (as relevant)

Cover: As per guideline; no spelling mistakes; nice appearance

Title page: As per guideline

List of contents: Preferably on one page

Key map: Often a good idea

Introduction: As per guideline

General appearance: Suitable length; few redundancies

A summary (if the document is more than a few pages)

Data basis: Adequacy, accuracy, validity. Data coverage or quality may well be less than ideal - this is often the case - but shortcomings and their significance should always be explained to the reader

Terminology: Consistency; whether it is easy to understand - if not so, a glossary (or explanatory text boxes) should be provided

Analysis: Clear, logical; summary of rationale given (if required); adequate documentation given for methodology (if required) (perhaps as references)

Flow charts: Sometimes, a simple flow chart, diagram or table can clarify a complex methodology or line of thought

Illustrations, graphs, maps: Clear to read; fully self-explanatory, with legends, units, scales, etc.

Assumptions, findings, recommendations, suggestions: Clearly identified, without risk that the reader mistake one category for another

References: Clearly identified

Appendices: Long background texts, data tables, background documentation may be presented in appendices, in order to make the text easier to read

Appendix C: General advice

... as relevant from case to case:

- In general, people don't read lengthy documents. Write as short and crisp as possible. Use appendices for lengthy descriptions, analyses, data summaries etc.
- Explain terminology (in text boxes, or in a separate glossary)
- Beware of the documentation. Include all references in the reference list, and use footnotes³ (or brackets) to indicate the origin of data, information and illustrations
- Keep assumptions and findings apart. Make it clear to the reader whether a statement is an observation, an assumption, some information obtained from elsewhere, an idea, or a recommendation. This can (for example) be done by locating various categories of statements in separate (sub-)sections. Key assumptions should be highlighted and should be included in the summary
- Quotations should be clearly marked, *'for example like this'*, and should be identified by an accurate reference with page number

Layout

Keep adequate margins all around text and figures

In case of colour maps, diagrams, and photos, be sure that these make sense also if copied in black-and-white

Try to maintain a reasonable file size of reports and overhead presentations - by proper pre-processing of maps and pictures

³ (with title and page number, *or* name of the agency/person and a date)

Appendix D: Expressions to avoid

Unnecessary words (pleonasms)

Don't write	Write
predicted beforehand	predicted
to predict the future	to predict
a plan for the future	a plan
a serious catastrophe	a catastrophe
an unexpected surprise	a surprise
completely full	full
fully adequate	adequate
growing bigger	growing
a new invention / discovery	an invention / a discovery
current status	status
prior experience	experience
significant milestone	milestone
necessary precondition	precondition
was first introduced	was introduced
a skilled expert	an expert
located in the village, living in the village	in the village
long-term sustainability	sustainability
more optimal, more perfect, more ideal	optimal, perfect, ideal (or 'better' if that is what you mean)!

Saying the same thing twice (tautologies)

Don't write	Write
an individual person	an individual <u>or</u> a person
an essential necessity	essential <u>or</u> a necessity
the cause is due to	the cause is <u>or</u> this is due to

Appendix E: For fun! :-)

<i>What you write</i>	<i>What the reader reads</i>
'It is generally known that ...'	'As far as you remember ...'
'The data represent a broad range of conditions'	'The data are wildly scattered'
'The data seem to indicate'	'There is no pattern, but this is what it should have looked like ...'
'The data strongly indicate ...'	'There actually is some vague pattern, and this is what it should have looked like ...'
'For example, in one village ...'	'In one village, the survey results supported your theory ...'
'The study has confirmed that ...'	'As everybody knew beforehand ...'
'Still some work is required ...'	'You ran out of money ...'
'Several assumptions were made during the analysis'	'After all this work, a plain answer would not really be appropriate'

About spelling

Aoccdrnig to a rscheearch at Cmabrigde Uinervtisy, it dseno't mtaetr in waht oerdr the ltteres in a wrod are, the only iproamtnt tihng is taht the frsrit and lsat ltteer be in the rghit pclae. The rset can be a taotl mses and you can sitll raed it whotuit a pboerlm. Tihs is bcuseae the huamn mnid deos not raed ervey lteter by istlef, but the wrod as a wlohe. Azanmig huh? Yaeh and I awlyas tghuhot spleling was ipmorant!...

Anonymous, in an e-mail chain letter

Ghoti and tchoghs

... may not immediately strike readers as staples of the British diet; and even those most enamoured of written English's idiosyncrasies may wince at this tendentious rendering of *'fish and chips'*. Yet the spelling, easily derived from other words, highlights the shortcomings of English orthography:

Gh	as in <u>to<u>gh</u></u>	=	F
o	as in <u>w<u>o</u>men</u>	=	i
ti	as in <u>na<u>ti</u>on</u>	=	sh
and		=	and
tch	as in <u>ma<u>tch</u></u>	=	ch
o	as in <u>w<u>o</u>men</u>	=	i
gh	as in <u>hicc<u>ough</u></u>	=	p
s		=	s

... or what about *ghoughpteighbteau* (for 'potato')?

The Economist, Volume 388, no. 8593, 16 August 2008, with reference to G B Shaw