

Lessons Not Learned at University #6

Metric or Imperial?

In the early 1970s Australia went metric. It meant a great simplification to the maths syllabus in schools as only one measurement system needed to be taught. There were many arguments about the advantages and disadvantages of conversion but in forestry we used the opportunity to finally get some consistency in measurements between various forestry organisations across Australia. Some of the archaic log, tree and timber measurements like Hoppus, loads, super feet, board feet, Scribner (yes, it was being used in one niche of Australia) all disappeared, and cubic metres true volume became the standard.

However, having said all that, the fact is any measurement standard is valid. Validity is a different argument to consistency.

In the years leading up to metrication, the arguments about the advantage of one measurement system over the other were legion. These arguments were often unclear and biased, and failed to distinguish between validity and consistency.

An earlier note commented on the procedure for combining different tree species into groups to enable the processing of the National Forest Inventory (NFI) in Burma, now Myanmar. Some 11,000 plots had been measured across the country and *The Consultant* had as his Terms of Reference to design and implement a system to process and report on that inventory data.

The Food and Agriculture Organization (FAO) Chief Technical Adviser (*The CTA*) was an Austrian who had only ever known metric measurements. He insisted the inventory be in metric and that all the reports be in metric as well, after all, as he put it, all FAO reports were in metric.

But Burma still wallowed in that legacy of the British Raj, imperial measurements. Apart from the FAO members of the NFI team, nobody in Burma even had a metric diameter tape, let alone an understanding of metric measurements such as hectares and cubic metres. It was clear to *The Consultant* that no NFI report presented in metric measurement would ever be of any use at all in Burma. FAO insisted that the reports be in diameter classes whereas the Burmese used girth classes. *The CTA* had apparently stated to senior Burmese forestry staff that the results were not going to be prepared in imperial units but in metric units only. Before *The Consultant* arrived the topic of the reporting format had reached a classic standoff. One side did not give an inch and the other did not give a cm.

A simple solution to the problem was finally reached. Since the data had been measured in metric, they would be stored in metric, and processed in metric using metric tree volume equations. The reports could then be presented with variable headings and the input data flagged to indicate whether the report was to be in metric or imperial, in girth or diameter classes, and what those classes should be. It needed to be a very flexible system as nobody really knew how the data would ultimately be used.

It is said that for every complex problem there is a simple solution – and it is usually wrong. It was soon found that not all the data were in metric and this fact had not been recorded in the manual or on the data sheets! The weights of bamboo culms were in pounds because they only had scales in pounds, not kilograms. This only became evident when the results were obviously wrong, and it took *The Consultant* some time to find out why. It took far longer to work out what had happened than it took to fix. It was another example of the necessity for consistency in standards, whatever the standards may be.

The reporting solution was not transmitted to *The CTA* until programming was well and truly under way. When *The CTA* came down from the metaphorical wall he was advised that changing the design to restrict it to just metric reporting was now simply impossible. It would take longer to implement the system as it would need a detailed systems revision. Did he wish to recommend a significant increase in the length of the consultancy?

In the end both sides got the reports they wanted.

The senior programmers even managed to change the reports so there was a third option; to print out the inventory results in that lovely looping Burmese script, a variant of Pali. They had worked out how to change the software in a printer to print the characters. Now absolutely everyone could read the reports!

Lesson: Metric or imperial, are both appropriate standards. The choice is generally made for you by circumstances. Both can even be used together if you are prepared to accept the extra layers of complexity and the risks attached. But take care!

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