



## WORKSHEET 4: CALCULATING YOUR GREENHOUSE GAS EMISSIONS FROM PAPER

This worksheet will assist you in working out your greenhouse gas (GHG) emissions from office paper consumption. Below you will find key emission factors and calculation methodologies that will assist you. Overleaf you will find tables to help you calculate emissions for office paper consumption.

This method relies on splitting your paper use into two broad categories – 100% recycled and virgin fibre paper. Where your paper is a mix (e.g. 80% recycled) a method is provided to proportion between the two. You may have more accurate factors or information about the paper you consume, and in this case, this should be used instead.

### KEY DATA NEEDED

- Reams of paper consumed and the type(s) of paper consumed (this should be available on your paper invoices)
- Weight of an average ream of paper used (this tends to be between 2.4-2.8 kg per ream)

### CALCULATION PROCESS:

1. Identify the proportion of 100% recycled paper and virgin fibre paper in **Sections 1 and 2** overleaf.
2. Multiply the number of reams by the weight of paper for both categories.
3. Then multiply the relevant emission factor to find the greenhouse gases in **Section 3** overleaf.

### KEY EMISSIONS FACTORS

#### Types of paper

- 100% recycled content      1.907 kg CO<sub>2</sub>-e per kg of paper consumed
- Virgin fibre content      1.867 kg CO<sub>2</sub>-e per kg of paper consumed

*Source: Centre of Design, RMIT University*

### KEY RESOURCES:

Department of Climate Change, **National Greenhouse Accounts (NGA) Factors**, November 2008  
 World Resources Institute and World Business Council for Sustainable Development, **Greenhouse Gas Protocol**, 2007  
 EPA Victoria, **Greenhouse Inventory Management Plan 2006/07**

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### SECTION 1 – CALCULATING PROPORTION OF RECYCLED PAPER USED

Recycled content of paper (%)	Reams of recycled paper	Quantity 100% recycled (reams)
X	=	

For example: 20 reams of 80% paper = 16 100% recycled reams (0.8 x 20)

### SECTION 2 – CALCULATING PROPORTION OF VIRGIN PAPER USED

Recycled paper			Non-recycled paper	
Virgin fibre content of recycled paper (%)	Reams of recycled paper	Quantity of virgin fibre content from recycled paper (reams)	Quantity of virgin fibre paper (reams)	Quantity virgin fibre (reams)
X	=	+	=	

For example: 20 reams of 80% paper = 4 virgin fibre reams (0.2 x 20)

### SECTION 3 – CALCULATING TOTAL PAPER GHG EMISSIONS

Paper Type	Number of reams	Average weight per ream (kg)	Total weight of paper (kg)	Conversion factor (kg to kg CO <sub>2</sub> -e)	GHG emissions (kg CO <sub>2</sub> -e)
100% recycled reams	X	=	X	1.907	=
Virgin fibre reams	X	=	X	1.867	=
<b>Total GHG emissions</b>					