

# Contents

<b>1</b>	<b>LUCAS survey</b> .....	<b>9</b>
<b>1.1</b>	<b>Introduction</b> .....	<b>9</b>
<b>1.2</b>	<b>The historical perspective</b> .....	<b>10</b>
<b>1.3</b>	<b>Methodological challenge - accessibility</b> .....	<b>10</b>
<b>1.4</b>	<b>LUCAS 2018 main features</b> .....	<b>11</b>
1.4.1	Master sample update.....	11
1.4.2	Coverage: LUCAS refers to the NUTS area .....	11
1.4.3	Survey design 2018: the concept.....	11
1.4.4	The Model .....	12
1.4.5	Dynamic stratification of the second phase sample .....	12
1.4.6	LUCAS survey 2018: the figures.....	12
<b>2</b>	<b>Data preparation and new information added data in statistical production</b> .....	<b>13</b>
<b>2.1</b>	<b>Introduction</b> .....	<b>13</b>
<b>2.2</b>	<b>The estimated Land Cover</b> .....	<b>13</b>
2.2.1	Additional information derived from Google Satellite .....	15
2.2.2	The other covariates considered in the model .....	17
2.2.3	Characteristics of the model used to estimate the land cover.....	17
2.2.4	Indexes to evaluate the results of the model.....	18
2.2.5	Results of the model .....	18
<b>2.3</b>	<b>The index of reachability</b> .....	<b>20</b>
<b>2.4</b>	<b>The probability of change</b> .....	<b>21</b>
<b>3</b>	<b>The sampling procedure data in editing and imputation</b> .....	<b>23</b>
<b>3.1</b>	<b>Optimisation of stratified sampling</b> .....	<b>23</b>
<b>3.2</b>	<b>The approach based on genetic algorithm</b> .....	<b>24</b>
<b>3.3</b>	<b>LUCAS sampling procedure</b> .....	<b>27</b>
3.3.1	Construction of the frame dataset .....	27
3.3.2	Construction of atomic strata .....	28
3.3.3	Choice of the precision constraints .....	28
3.3.4	Optimisation of stratification and determination of required sample size .....	29
3.3.5	Adjustment of the final sampling size.....	30
3.3.6	Frame update and sample selection.....	31
3.3.7	Attribution of the enumeration mode .....	35

<b>4</b>	<b>Analysis of resulting sample and comparison to previous sample designs .....</b>	<b>36</b>
<b>4.1</b>	<b>The new stratification variable in Master 2018 .....</b>	<b>36</b>
<b>4.2</b>	<b>Eligibility and photo interpretation .....</b>	<b>39</b>
<b>4.3</b>	<b>The use of photo interpretation.....</b>	<b>40</b>
<b>4.4</b>	<b>The stratification of the sample.....</b>	<b>42</b>
<b>4.5</b>	<b>The calculation of the sample size and the allocation of the sampling units .....</b>	<b>45</b>
<b>5</b>	<b>Conclusions .....</b>	<b>49</b>
<b>6</b>	<b>References .....</b>	<b>51</b>