

Policy Objective 2 ERDF/CF Indicators

#CohesionPolicy #EUinmyRegion #ESIFOpendata



Indicators in PO2



European Commission

PO2 Greener, low-carbon Europe

Specific Objective	Outputs	Results
2.i Promoting energy efficiency measures	performance of their dwelling RCO 19 - Public buildings supported to improve energy performance RCO 20 - District heating network lines newly constructed or improved	RCR 26 - Annual final energy consumption (of which: residential, pivate non-residential, public non-residential) RCR 27 - Households with improved energy performance of their dwellings RCR 28 - Buildings with improved energy classification (number) (of which: residential, private non-residential, public non-residential) RCR 29 - Estimated GHG emissions* RCR 30 - Enterprises with improved energy performance
2.ii Promoting renewable energy 2.iii Developing smart energy	energy (of which: electricity, thermal) RCO 97 - Number of energy communities and renewable energy communities supported* RCO 23 - Digital management systems for smart grids	RCR 31 - Total renewable energy produced (of which: electricity, thermal) RCR 32 - Capacity for renewable energy connected to the grid/ operational *
systems, grids and storage at local level	RCO 98 - Households supported to use smart energy	RCR 33 - Users connected to smart grids RCR 34 - Roll-out of projects for smart grids
2.iv Promoting climate change adaptation, risk prevention and disaster resilience	RCO 24 - New or upgraded disaster monitoring, warning and response systems* RCO 25 - Coastal strip, river banks and lakeshores, and landslide protection newly built or consolidated to protect people, assets and natural environment RCO 26 - Green infrastructure built for adaptation to climate change	RCR 35 - Population benefiting from flood protection measures RCR 36 - Population benefiting from forest fires protection measures RCR 37 - Population benefiting from protection measures against climate related natural disasters (other than floods and forest fires) RCR 96 - Population benefiting from protection measures against non-climate related natural risks and risks related to human activities* RCR 38 - Estimated average response time to disaster situations*
2.v Promoting sustainable water management	household water connections RCO 31 - Length of sewage collection newtorks newly constructed or consolidated RCO 32 - New or upgraded canacity for waste water	RCR 41 - Population connected to improved water supply RCR 42 - Additional population connected to at least secondary waste water treatment RCR 43 - Water losses RCR 44 - Waste water properly treated
2.vi Promoting the transition to a circular economy	RCO 34 - Additional capacity for waste recycling	RCR 46 - Population served by waste recycling facilities and small waste management systems RCR 47 - Waste recycled RCR 48 - Recycled waste used as raw materials RCR 49 - Waste recovered
2.vii Enhancing biodiversity, green infrastructure in the urban environment and reducing pollution	RCO 37 - Surface of Natura 2000 sites covered by protection and restoration measures in accordance with the prioritised action framework RCO 99 - Surface area outside Natura 2000 sites covered by protection and restoration measures	RCR 50 - Population benefiting from measures for air quality RCR 95 - Population having access to new or upgraded green infrastructure in urban areas RCR 51 - Population benefiting from measures for noise reduction RCR 52 - Rehabilitated land used for green areas, social housing, economic or community activities

Specific Objective 2.i *Promoting energy efficiency measures*



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RCO18 – Households supported to improve energy performance of their dwellings

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
72%	67%	67%	61%	61%
Sample: 13-14				

□ Scope:

- households or dwellings?
- social housing included?
- apartments or building?
- Measurement unit: square metres, number of households, dwellings?
- □ Type of support: *non-financial*?
- □ Overlap with RCR27 (eligibility)
- □ Improved energy performance
- Time reporting



RCO19 – Public building supported to improve energy performance

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
72%	61%	67%	61%	67%
Sample: 13				

□ Measurement unit: *number of buildings or square metres?*

- □ Overlap with RCR28 (eligibility)
- □ Public building: *definition*?
- □ Social housing: *included*?
- Improved energy performance
- □ Double counting: *necessary*?
- Time reporting



RCO20 – District heating network lines newly constructed or improved

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
56%	61%	50%	56%	61%
Sample: 12-14				

□ Name: *length of district heating network lines etc?*

- □ Scope:
 - heating and cooling?
 - public and private?
 - amount of energy transported?
- □ Measurement unit: *km or number of buildings? metres of km?*
- □ Improved energy performance efficiency?



RCR26 – Annual final energy consumption (of which: residential, private residential, private nonresidential, public non-residential)

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
44%	39%	39%	33%	44%
Sample: 14				

□ Scope:

- final energy or primary energy consumption?
- enterprises, buildings, dwellings included?
- Name: absolute level of consumption or reduction in consumption? % change?
- Estimated or real consumption?
- □ Baseline and target difficult to establish at programming stage
- Overlap with RCR28 (public buildings)
- Subcategories (residential etc.)
- Time measurement



RCR27 – Households with improved energy performance of their dwellings

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
56%	56%	56%	56%	56%
Sample: 13-14				

□ Merge with RCO18 as output?

RCR28 – Buildings with improved energy classification (of which: residential, private nonresidential, public non-residential)

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
61%	78%	78%	72%	83%
Sample: 15				

□ Merge with RCO19 as output?



RCR29 – Estimated greenhouse gas emissions

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
83%	61%	56%	39%	44%
Sample: 14-15				

- Name: absolute level of GHG emissions or reduction in GHG emissions? % change?
- Measured or estimated?
- Measurement unit
- Methodology
- Baseline and target difficult
- Time measurement



RCR30 – Enterprises with improved energy performance

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
78%	72%	78%	44%	67%
Sample: 15				

- □ Merge into RCO01 (*adapted for SO 2.i*) ?
- □ Improved energy performance for enterprises (for output)
- □ Time measurement (for output)



New indicators proposed by Member States

- Enterprises which develop and introduce new solutions or new technologies which support low carbon economy or energy or material efficiency
- Enterprises which develop a new product to market promoting low carbon economy
- Experiments and pilots which enhance low carbon actions in enterprises
- Experiments and pilots which enhance low carbon actions in enterprises
- Number of organisations receiving support for capacity buildings
- Number of organisations/ enterprises introducing new or improved products, services, processes and application



New indicators proposed by Member States (continued)

 Number of individuals covered by actions to change consumption behaviour



Specific Objective 2.ii *Promoting renewable energy*



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RCO22 – Additional production capacity for renewable energy (of which: electricity, thermal)

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
67%	78%	61%	67%	72%
Sample: 14				

□ Name:

- additional by default?
- financed by the project?
- □ Separate indicators: *electricity and thermal*?
- □ Categories (electricity, thermal): remove?
- □ Measurement unit: *kW or MW? equivalent energy units?*
- Production capacity
- Renewable energy
- □ Subcategories: *destination or source*?



RCO97 – Number of energy communities and renewable energy communities supported

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
44%	56%	67%	67%	67%
Sample: 14				

□ Scope: *energy communities and RES communities*?

□ Name: *remove* "*number of"* ?

□ Target group: *small? organizations?*

□ Measurement unit: *renewable energy communities*?

Renewable energy communities: large enterprises?



RCR31 – Total renewable energy production (of which: electricity, thermal)

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
61%	56%	50%	39%	56%
Sample: 14				

- □ Relevance, robustness
- □ Sub-categories (electricity, thermal): *destination or source*?
- □ Period of measurement: *MWh or MWh/year*?
- □ Additional or total production?
- □ Measurement unit: *kWh, toe, TJ, GWh/year*?
- □ Calculation: *gross or net*?
- Double counting: enterprise level?
- □ Time measurement: *one year sufficient?*



RCR32- Renewable energy: Capacity connected to the grid (operational)

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
61%	67%	61%	56%	61%
Sample: 13				

- □ Scope: *self-consumption*?
- □ Capacity: *maximum installed, peak power*?
- □ Time measurement



New indicators proposed by Member States

 Enterprises which create new business activity based on renewable energy solutions and supporting low carbon economy



Specific Objective 2.iii *Developing smart energy systems, grids and storage at local level*



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RCO23 – Digital management systems for smart grids

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
61%	61%	50%	56%	50%
Sample: 13				

- □ Scope: *digital management systems*?
- New systems and significant upgrades
- □ Minimum level of digitalisation?
- Definition of smart grids?
- Double counting
- □ Time measurement



RCO98 – Households supported to use smart energy grids

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
50%	56%	44%	44%	44%
Sample: 10				

□ Relevance

New output – Solutions for electricity storage

Measurement unit: capacity (MWh) or euro (total investments in supported projects)?



RCR33 – Users connected to smart grids

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
44%	50%	50%	33%	50%
Sample: 12				

- □ Name: smart distribution systems
- □ Measurement unit: person or premises? end user?
- Baseline
- □ Overlap with RCO98
- □ Time measurement



RCR34 – Roll-out of projects for smart grids

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
33%	33%	33%	44%	33%
Sample: 12				

- □ Type indicator: *output or result?*
- □ Relevance



New indicators proposed by Member States

- Number of organisations supported to develop, upgrade or improve systems
- Number of systems developed or upgraded
- Smart gas transmission or distribution pipelines newly constructed or upgraded
- New active capacity in the underground storage of natural gas (smart infrastructure)
- Smart electricity transmission or distribution pipelines newly constructed or upgraded
- Power stations with smart functionalities newly constructed or upgraded



Specific Objective 2.iv *Promoting climate change adaptation, risk prevention and disaster resilience*



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RCO24 – New or upgraded disaster monitoring, preparedness, warning and response systems

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
50%	67%	67%	67%	67%
Sample: 13				

Name:

- include pollution?
- not indicative of the measurement unit
- Measurement unit
 - *surface covered? area protected?*
 - number of systems
- □ Scope: *national systems*?
- □ Intervention fields: *same information?*



RCO25 – Coastal strips, river banks an lakeshores, landslides protection newly built or consolidated to protect people, assets and the natural environment

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
50%	61%	72%	61%	56%
Sample: 14				

- Measurement unit: *monetary or physical?*
- Name: too long?
- Overlap with RCO24



RCO26 – Green infrastructure built for adaptation to climate change

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
72%	67%	61%	56%	67%
Sample: 14				

□ Name:

- area of?
- *built or (significantly) upgraded?*
- □ Scope: *infrastructure or green infrastructure*
- □ Overlap with RCO36
- □ Measurement unit: *number of projects? square metres?*
- □ Significantly improved
- Double counting



RCO27 – National/ regional/ local strategies addressing climate change adaptation

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
61%	67%	61%	67%	67%
Sample: 13-14				

□ Name: *national/ regional/ local?*

□ Scope:

- extend to water management?
- projects? action plans?

Definition:

- substantially revised
- adopted?



RCO28 – Areas covered by protection measures against forest fires

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
61%	67%	67%	67%	56%
Sample: 12-13				

□ Type indicator: *output or result?*

- □ Measurement unit: *hectares or km?* % of hectares protected?
- □ Other risks (storms etc) no indicator



RCR35 – Population benefiting from flood protection measures

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
72%	72%	67%	50%	50%
Sample: 13-14				

- Name: include preparedness, protection, recovery and evaluation?
- □ Measurement: *not limited to resident population?*
- Data source:
 - hazard maps
 - administrative registries
 - population register

Double counting: *relevant*?



RCR36 – Population benefiting from forest fires protection measures

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
56%	61%	61%	44%	44%
Sample: 14-15				

- □ Measurement unit: *area or population*?
- □ Protection or prevention?
- □ Measurement: *not limited to resident population?*
- □ Which population?
- □ Protection measures at national level?
- Data source:
 - hazard maps
 - administrative registries
 - population register



RCR37 – Population benefiting from protection measures against climate related natural disasters (other than floods and forest fires)

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
72%	67%	61%	39%	50%
Sample: 13				

RCR96 – Population benefiting from protection measures against non-climate related natural risks and risks related to human activities

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
61%	50%	39%	56%	39%
Sample: 11-12				



RCR38 – Estimated average response time to disaster situations

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
44%	44%	44%	33%	39%
Sample: 11-12				

• Aggregation: *informative*?



New indicators proposed by Member States

- Number organisations supported for climate change adjustments (agricultural, forestry, construction, technical supply system or other)
- Number organisations introducing new or improved products, services, processes and applications (agricultural, forestry, construction, technical supply system or other)



Specific Objective 2.v *Promoting sustainable water management*



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RCO30 – Length of new or consolidated pipes for household water connections

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
72%	78%	78%	72%	61%
Sample: 14-15				

❑ Name:

- public water supply?
- all consumers, not just households?
- drinking water?
- full length of distribution system or connections?
- consolidated or modernized? replaced? Upgraded?
- □ Measurement unit: *metres or km*?
- □ Pipes operational?
- Private or public water lines?
- □ Substantial improvement?



RCO31 – Length of sewage collection networks newly connected or consolidated

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
67%	72%	72%	67%	56%
Sample: 13-14				

Name:

- sewage or waste water?
- connections only?
- consolidated or modernized? replaced? upgraded?
- only households?

□ Scope: *storm water management*?



RCO32 – New or upgraded capacity for waste water treatment

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
78%	78%	78%	72%	67%
Sample: 14				

- □ Name: *additional*?
- □ Measurement unit: *population equivalent served*?
- □ Upgraded/ new treatment according to Directive 91/271/EC
- □ Baseline: *explain*?
- □ Scope of improvements



RCR41 – Population connected to improved water supply

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
67%	61%	67%	39%	44%
Sample: 13				

Measurement:

- population or dwellings?
- new users only?
- □ Improved water supply
- □ Overlap with RCR43 (water losses)
- □ Use of RCR41: *also for infrastructure?*
- □ Resident population
- □ Terms of Drinking Water Directive: *minimum requirement*?



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RCR42 – Population connected to at least secondary waste water treatment

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
72%	72%	61%	44%	50%
Sample: 13				

□ Name: *dwellings?* households?

Measurement unit: dwellings? population equivalent?

- □ Scope:
 - new users connected to the system?
 - all users using the supported infrastructure?
 - commercial entities?
 - public buildings?
- Double counting: difficult
- Separate indicators for new users and for capacity of supported plants

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RCR43 – Water losses

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
61%	44%	61%	39%	61%
Sample: 13				

- □ Name: *reduction in water losses*?
- Difficulties identified:
 - Not measurable?
 - Aggregation impossible?
- □ Scope: waste water losses included?
- Cumulative reporting



RCR44 – Waste water properly treated

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
67%	56%	67%	44%	61%
Sample: 13				

□ Interpretation

□ Overlap with RCR42



New indicators proposed by Member States

New or upgraded water tank capacity



Specific Objective 2.vi *Promoting the transition to a circular economy*



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RCO34 – Additional capacity for waste recycling

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
78%	78%	78%	72%	67%
Sample: 14				

- □ Name: *remove additional*?
- □ Measurement unit: *tonnes/year*
- □ Waste recycling: definition
- □ Scope:
 - waste facilities built or expanded?
 - equipment supported?
 - small waste management systems?
 - collection of waste?

New output for "Separate collection of waste" proposed



RCR46 – Population served by waste recycling facilities and small waste management systems

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
50%	44%	44%	39%	39%
Sample: 14-15				

Relevance

New result for "Waste collected separately" proposed



RCR47 – Waste recycled

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
78%	72%	61%	56%	61%
Sample: 14-15				

- Distinction from RCR48
- Distinction from RCR49
- □ Measurement unit: *Mg/year*?
- Backfilling
- □ Additional waste recycled
- □ Measured before or after treatment?
- □ Aggregation (quantity/year)



RCR48 – Recycled waste used as raw materials

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
61%	56%	44%	44%	44%
Sample: 13				

- Definition
- Name: recycled implied?

RCR49 – Waste recovered

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
61%	67%	44%	44%	61%
Sample: 14				



Specific Objective 2.vii *Enhancing biodiversity, green infrastructure in the urban environment and reducing pollution*



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RCO36 – Surface area of green infrastructure supported in urban areas

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
78%	67%	61%	56%	67%
Sample: 14-15				

- □ Name: *surface*?
- □ Measurement unit: *hectares*?
- □ Scope:
 - parks, public gardens, public squares etc.
 - green walls, roofs
 - schoolyards excluded?
- □ Overlap with RCO26
- □ Surface or infrastructure or area covered?
- Significant improvement
- Blue infrastructure



RCO37 – Surface of Natura 2000 sites covered by protection and restoration measures in accordance with the prioritized action framework

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
72%	67%	61%	44%	63%
Sample: 13				

- □ Name: *remove* "*in accordance with etc*"?
- □ Distinction from RCO26 and RCO36
- □ Merge with RCO99 ?
- □ Measurement: *which area? scope?*



RCO99 – Surface area outside Natura 2000 sites covered by protection and restoration measures

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
72%	61%	61%	39%	56%
Sample: 13				

□ Overlap with RCO26 and RCO36



RCO38 – Surface area of rehabilitated land supported

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
67%	67%	67%	61%	61%
Sample: 13				

□ Name: *decontaminated and rehabilitated*?

- □ Measurement: *which surface*?
- □ Reference to Directive 2004/35/CE (environmental liability)
- Double counting: *relevant*?
- Other:
 - waste and soil removed ?
 - soil rehabilitated in situ ?



RCO39 – Systems for monitoring air pollution installed

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
56%	67%	56%	61%	50%
Sample: 12-13				

□ Name: investments in?

□ Scope:

- Environment benefiting from measures for air quality?
- surface covered by monitoring systems ?

□ System installed



RCR50 – Population benefiting from measures of air quality

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
44%	33%	22%	39%	39%
Sample: 11-12				

□ Measurement: *measures for improving air quality*?

□ Which population?

- Double counting
- □ Time measurement



RCR95 – Population having access to new or upgraded green infrastructure in urban areas

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
78%	61%	56%	33%	44%
Sample: 14				

□ Measurement: 1 km?

RCR51 – Population benefiting from measures for noise reduction

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
50%	31%	33%	44%	22%
Sample: 14				

□ Overlap with RCR95



RCR52 – Rehabilitated land used for green areas, social housing, economic or community services

RELEVANT (3,4)	ACCEPTED (3,4)	CREDIBLE (3,4)	EASY (3,4)	ROBUST (3,4)
78%	61%	72%	44%	56%
Sample: 14				

□ Name: *surface*?

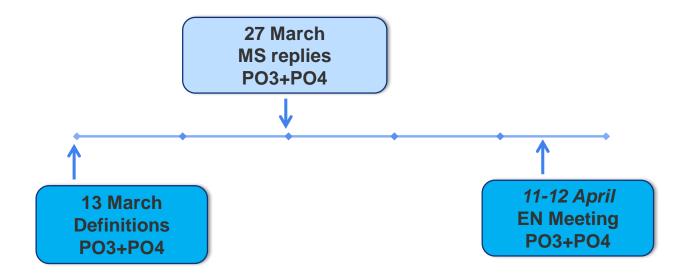
□ Overlap with RC38

Action plan

□ Types of use: *limiting*?



NEXT: Indicators PO3and PO4 (March - April)



THANK YOU!

