



TEMAT 2

Plan Działań na Rzecz Zrównoważonej Energii (SEAP)



Treść prezentacji

- Rola Wspólnego Centrum Badawczego (JRC)
- Co to jest SEAP?
- 10 głównych zasad dot. opracowania SEAP
- Przykłady





Rola Wspólnego Centrum Badawczego (JRC)

**“Wspieranie rozwoju, wdrażania i monitoringu
Porozumienia Burmistrzów od strony technicznej.”**

**Zespół ds. Porozumienia Burmistrzów w JRC : Paolo
Bertoldi, Michele Canova, Federica Paina, Ronald
Piers**



Plan prac JRC

Zapewnienie inicjatywie wsparcia naukowego i technicznego :

- Opracowanie poradnika poświęconego SEAP
- Prowadzenie Centrum Pomocy Technicznej
- Ocena przedłożonych Planów Działań na Rzecz Zrównoważonej Energii (SEAP) wraz z informacją zwrotną dla miast-sygnatariuszy
- Monitoring wdrażania Porozumienia, w tym opracowanie szczegółowych wytycznych dot. prowadzenia monitoringu



Poradnik dot. SEAP

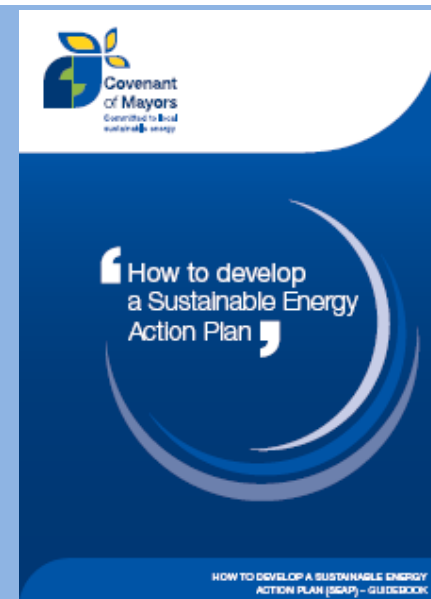
Cel: pomoc miastom i gminom w opracowaniu i wdrożeniu SEAP.

3 części:

Część I : Jak opracować i wdrożyć SEAP?

Część II: Jak sporządzić inwentaryzację emisji CO₂?

Część III: Środki techniczne





Centrum Pomocy Technicznej

- Najczęściej Zadawane Pytania (FAQ) pod adresem:
www.eumayors.eu/support/faq_en.html
- Elektroniczny formularz zapytania pod adresem:
www.eumayors.eu/about/contact_en.html
- Bezpośredni kontakt z JRC:
Telefon: +39 0332 78 3599/9703
JRC-COM-TECHNICAL-HELPDESK@ec.europa.eu

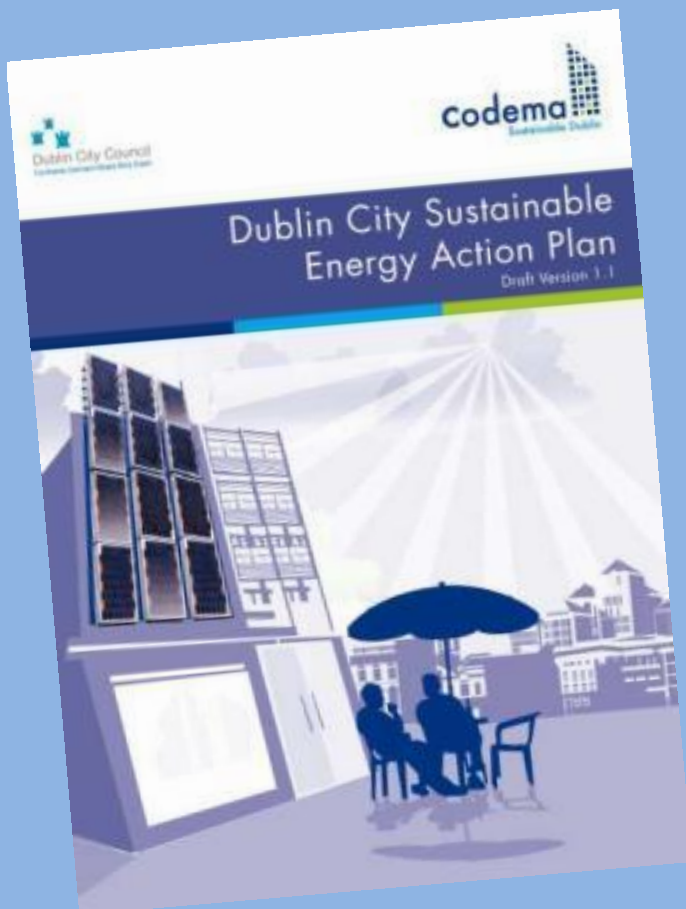


Zobowiązania Sygnatariuszy

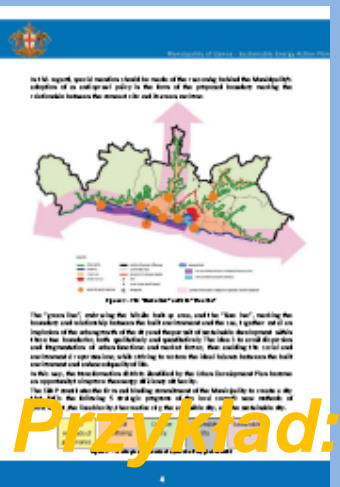
- Redukcja emisji CO₂ na swoim terenie o co najmniej 20% dzięki wdrożeniu Planu Działań na rzecz Zrównoważonej Energii (SEAP)
- Sporządzenie Bazowej Inwentaryzacji Emisji
- Przedłożenie SEAP w ciągu roku od dnia podpisania Porozumienia
- Przystosowanie struktur miejskich do realizacji niezbędnych działań
- Mobilizacja społeczeństwa obywatelskiego
- Sporządzanie raz na dwa lata raportu z wdrażania planu



Co to jest SEAP?



- SEAP pokazuje, w jaki sposób Sygnatariusz Porozumienia zamierza wypełnić przyjęte zobowiązania do roku 2020.
SEAP wykorzystuje rezultaty Bazowej Inwentaryzacji Emisji do identyfikacji działań, które umożliwią osiągnięcie założonego przez władze lokalne celu w zakresie redukcji CO₂.
- SEAP określa *konkretne środki redukcji emisji*, wraz z ich ramami czasowymi, osobami odpowiedzialnymi za ich wprowadzenie oraz budżetem
- SEAP jest regularnie aktualizowany



University of Twente
Faculty of Science and Engineering

Germany city 2002: Drink average consumption in the last calendar year and last consumption



Legend:

- Alcohol
- Tobacco
- Drugs

Alcohol consumption (per 1000 inhabitants):

- Beer: ~1500
- Wine: ~1000
- Spirits: ~500

Tobacco consumption (per 1000 inhabitants):

- Cigarettes: ~1500
- Cigars: ~500

Drugs consumption (per 1000 inhabitants):

- Heroin: ~100
- Cocaine: ~100
- Cannabis: ~100
- Amphetamine: ~100
- LSD: ~100
- Mushrooms: ~100
- Ecstasy: ~100
- Other: ~100

Figure 1: Germany city 2002: Drink average consumption in the last calendar year and last consumption

Table 1: Germany city 2002: Drink average consumption in the last calendar year and last consumption

Category	Sub-category	Consumption (per 1000 inhabitants)
Alcohol	Beer	~1500
	Wine	~1000
	Spirits	~500
Tobacco	Cigarettes	~1500
	Cigars	~500
Drugs	Heroin	~100
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	Amphetamine	~100
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	Ecstasy	~100
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Table 2: Germany city 2002: Drink average consumption in the last calendar year and last consumption

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Table 3: Germany city 2002: Drink average consumption in the last calendar year and last consumption

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	LSD	~100
	Mushrooms	~100
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Table 4: Germany city 2002: Drink average consumption in the last calendar year and last consumption

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	Cannabis	~100
	Amphetamine	~100
	LSD	~100
	Mushrooms	~100
	Ecstasy	~100
	Other	~100

Table 5: Germany city 2002: Drink average consumption in the last calendar year and last consumption

Category	Sub-category	Consumption (per 1000 inhabitants)
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Tobacco	Cigarettes	~1500
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	Cocaine	~100
	Cannabis	~100
	Amphetamine	~100
	LSD	~100
	Mushrooms	~100
	Ecstasy	~100
	Other	~100

Table 6: Germany city 2002: Drink average consumption in the last calendar year and last consumption

Category	Sub-category	Consumption (per 1000 inhabitants)
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	Amphetamine	~100
	LSD	~100
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	Ecstasy	~100
	Other	~100

Table 7: Germany city 2002: Drink average consumption in the last calendar year and last consumption

Category	Sub-category	Consumption (per 1000 inhabitants)
Alcohol	Beer	~1500
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Tobacco	Cigarettes	~1500
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Table 8: Germany city 2002: Drink average consumption in the last calendar year and last consumption

Category	Sub-category	Consumption (per 1000 inhabitants)
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	Amphetamine	~100
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	Mushrooms	~100
	Ecstasy	~100
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Table 9: Germany city 2002: Drink average consumption in the last calendar year and last consumption

Category	Sub-category	Consumption (per 1000 inhabitants)
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	LSD	~100
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Table 10: Germany city 2002: Drink average consumption in the last calendar year and last consumption

Category	Sub-category	Consumption (per 1000 inhabitants)
Alcohol	Beer	~1500
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Drugs	Heroin	~100
	Cocaine	~100
	Cannabis	~100
	Amphetamine	~100
	LSD	~100
	Mushrooms	~100
	Ecstasy	~100
	Other	~100

Table 11: Germany city 2002: Drink average consumption in the last calendar year and last consumption

Category	Sub-category	Consumption (per 1000 inhabitants)
Alcohol	Beer	~1500
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Tobacco	Cigarettes	~1500
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	Cocaine	~100
	Cannabis	~100
	Amphetamine	~100
	LSD	~100
	Mushrooms	~100
	Ecstasy	~100
	Other	~100

Table 12: Germany city 2002: Drink average consumption in the last calendar year and last consumption

Category	Sub-category	Consumption (per 1000 inhabitants)
Alcohol	Beer	~1500
	Wine	~1000
	Spirits	~500
Tobacco	Cigarettes	~1500
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	Cannabis	~100
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	Mushrooms	~100
	Ecstasy	~100
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Table 13: Germany city 2002: Drink average consumption in the last calendar year and last consumption

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	Amphetamine	~100
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	Mushrooms	~100
	Ecstasy	~100
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Table 14: Germany city 2002: Drink average consumption in the last calendar year and last consumption

Category	Sub-category	Consumption (per 1000 inhabitants)
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Tobacco	Cigarettes	~1500
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	Cannabis	~100
	Amphetamine	~100
	LSD	~100
	Mushrooms	~100
	Ecstasy	~100
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Table 15: Germany city 2002: Drink average consumption in the last calendar year and last consumption

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Drugs	Heroin	~100
	Cocaine	~100
	Cannabis	~100
	Amphetamine	~100
	LSD	~100
	Mushrooms	~100
	Ecstasy	~100
	Other	~100

Table 16: Germany city 2002: Drink average consumption in the last calendar year and last consumption

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	Amphetamine	~100
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	Mushrooms	~100
	Ecstasy	~100
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Table 17: Germany city 2002: Drink average consumption in the last calendar year and last consumption

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	Cannabis	~100
	Amphetamine	~100
	LSD	~100
	Mushrooms	~100
	Ecstasy	~100
	Other	~100

Table 18: Germany city 2002: Drink average consumption in the last calendar year and last consumption

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Table 19: Germany city 2002: Drink average consumption in the last calendar year and last consumption

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Table 20: Germany city 2002: Drink average consumption in the last calendar year and last consumption

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	Amphetamine	~100
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	Mushrooms	~100
	Ecstasy	~100
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Table 21: Germany city 2002: Drink average consumption in the last calendar year and last consumption

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	Amphetamine	~100
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	Mushrooms	~100
	Ecstasy	~100
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Table 22: Germany city 2002: Drink average consumption in the last calendar year and last consumption

Category	Sub-category	Consumption (per 1000 inhabitants)
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	Cannabis	~100
	Amphetamine	~100
	LSD	~100
	Mushrooms	~100
	Ecstasy	~100
	Other	~100

Table 23: Germany city 2002: Drink average consumption in the last calendar year and last consumption

Category	Sub-category	Consumption (per 1000 inhabitants)
Alcohol	Beer	~1500
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Tobacco	Cigarettes	~1500
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	Cannabis	~100
	Amphetamine	~100
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Table 24: Germany city 2002: Drink average consumption in the last calendar year and last consumption

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	Amphetamine	~100
	LSD	~100
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Table 25: Germany city 2002: Drink average consumption in the last calendar year and last consumption

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Alcohol	Beer	~1500
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	Amphetamine	~100
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	Mushrooms	~100
	Ecstasy	~100
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Table 26: Germany city 2002: Drink average consumption in the last calendar year and last consumption

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Alcohol	Beer	~1500
	Wine	~1000
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	Amphetamine	~100
	LSD	~100
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	Ecstasy	~100
	Other	~100

Table 27: Germany city 2002: Drink average consumption in the last calendar year and last consumption

Category	Sub-category	Consumption (per 1000 inhabitants)
Alcohol	Beer	~1500
	Wine	~1000
	Spirits	~500

[illegible]

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INTELLIGENT ENERGY
EUROPE 



Szablon SEAP on-line – Część I



Helpdesk Tool

- Home
- Cities
- COMO dashboard
- Password

Genova

General Contacts Supporting Structures SEAP Benchmarks of Excellence Account

Overall Strategy Emission Inventory Sustainable Energy Action Plan SEAP Submission Archive

Overall Strategy

[Instructions](#)

[close the lock](#)

Green fields: mandatory fields

1) Overall CO2 emission reduction target

(%) by 2020

23

Please tick the corresponding box

- ☒ Absolute reduction
☐ Per capita reduction

2) Long-term vision of your local authority (please include priority areas of action, main trends and challenges)

Starting from the analysis of the data and results achieved thank to the filling-in of the Baseline Emission Inventory (BEI) and according to strategical development axes of the Municipality of Genoa (Administration governance programme



10 głównych zasad*

- Ww. zasady są powiązane ze zobowiązaniami przyjętymi przez Sygnatariuszy Porozumienia i stanowią podstawowy składnik sukcesu.
- Niezastosowanie się do tych zasad może skutkować negatywną oceną SEAP!





10 głównych zasad

1. Formalne przyjęcie SEAP przez Radę Miasta/Gminy
2. Zobowiązanie do ograniczenia emisji CO₂ o co najmniej 20% do roku 2020

Jeżeli w planie przyjęto długoterminowy cel redukcyjny (na przykład dla 2030 roku)
=> ustal cel pośredni dla 2020 roku

3. Sporządzenie Bazowej Inwentaryzacji Emisji CO₂ (BEI)

PATRZ: osobna prezentacja na temat BEI.



Genova

General	Contacts	Supporting Structures	SEAP	Benchmarks of Excellence	Account
Overall Strategy	Emission Inventory	Sustainable Energy Action Plan	SEAP Submission	Archive	

Sustainable Energy Action Plan

 [Instructions](#)

Green fields: mandatory fields

1) Title of your Sustainable Energy Action Plan

Title

Sustainable Energy Action Plan

Date of formal approval

5 August 2010

Authority approving the plan

Municipal Council

Save



10 głównych zasad

4. Kompleksowe środki obejmujące kluczowe sektory:

- Budynki i obiekty komunalne
- Sektor mieszkalny
- Sektor usług
- Transport publiczny i prywatny
- Przemysł (opcjonalnie)
- Itd..

Zaleca się, aby przed rozpoczęciem planowania działań i środków, ustalić długo-terminową wizję z jasno określonymi celami.

Poradnik poświęcony SEAP zawiera szereg sugestii dotyczących polityk i środków, które można wprowadzić na szczeblu lokalnym.





10 głównych zasad

5. Strategie i działania do roku 2020

- **Długoterminowa strategia i cele do roku 2020,** uwzględniające konkretne zobowiązania w obszarach takich jak:
 - planowanie przestrzenne,
 - transport i mobilność,
 - zamówienia publiczne,
 - standardy dla nowych/remontowanych budynków itd.

- **Szczegółowe środki dla najbliższych 3-5 lat**
 - opis,
 - odpowiedzialny wydział lub osoba,
 - ramy czasowe (początek-koniec, główne kamienie milowe),
 - szacunkowe koszty i źródła finansowania,
 - szacunkowe oszczędności energii / wzrost produkcji energii ze źródeł odnawialnych,
 - towarzysząca szacunkowa redukcja emisji CO₂.

2) Key elements of your Sustainable Energy Action Plan

Legend of colours and symbols:

Green fields are compulsory

Grey fields are non editable

⚡ Add action

✖ Delete action

ⓘ Please save the information after each sector, otherwise your data will be lost.

niezbędne

Jeżeli gmina posiada stosowne dane



SECTORS & fields of action	KEY actions/measures per field of action	Responsible department, person or company (in case of involvement of 3rd parties)	Implementation [start time]	Implementation [end time]	Estimated costs per action/measure	Expected energy saving per measure [MWh/a]	Expected renewable energy production per measure [MWh/a]	Expected CO2 reduction per measure [t/a]	Energy saving target per sector [MWh] in 2020	Local renewable energy production target per sector [MWh] in 2020	CO2 reduction estimation per sector [t] in 2020 option 1 Save	
BUILDINGS, EQUIPMENT / FACILITIES & INDUSTRIES:									Save sector	649375	411	157896
Municipal buildings, equipment/facilities	EDI - S01 - Installation of thermal solar collectors on the roofs of sports centres	Municipality	2010	2013	533000		411	104				
	EDI - S02 - Tenders /out-contracting for management of heating systems	Municipality	2012	2013		27100		5474				
	EDI - S04 - Energy Audits on school buildings	Municipality	2010	2013	0							
	EDI - S05 - Development of municipal energy data-base	Municipality	2010	2015	10000							
	EDI - S06 - Retrofitting for heating systems (conversion from heating oil to natural gas)	Municipality	2010	2013		45390		12664				
	EDI - S07 - Multi-service Technology Agreement for local health centres of Liguria Region	Liguria Region	2008	2018		47576		12760				
	EDI - S08 - Energy saving in school buildings	Municipality	2010	2015		16539		4715				
	EDI - S09 - Energy management of the property owned by A.R.T.E. (local housing agency)	ARTE	2010	2013	370000	5718		1388				
Tertiary (non municipal) buildings, equipment/facilities			2010	2010								
Residential buildings	EDI - S03 - Building Regulations	Municipality	2010	2020		323382		78730				
	EDI - L03 - Domotics - Home automation	Municipality	2011	2020		169330		34662				

obowiązkowo



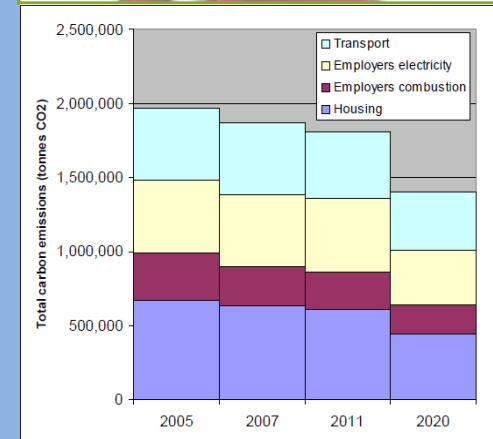
10 głównych zasad

6. Przystosowanie struktur miejskich

7. Mobilizacja społeczeństwa obywatelskiego

8. Finansowanie
(Identyfikacja głównych źródeł finansowania)

9. Monitoring i raportowanie
SEAP powinien zawierać krótki opis tego, w jaki sposób władze lokalne zamierzają śledzić realizację działań i monitorować ich rezultaty; patrz: prezentacja na temat BEI



Overall Strategy

 [Instructions](#)

 [close the lock](#)

Green fields: mandatory fields

1) Overall CO2 emission reduction target

(%) by 2020

0

Please tick the corresponding box

- ☒ Absolute reduction
- ☐ Per capita reduction

2) Long-term vision of your local authority (please include priority areas of action, main trends and challenges)

The vision of the City of Copenhagen is to be the first carbon neutral capital in the world by 2025.

In the short/medium term, we will reduce CO2-emissions by 20% between 2005 and 2015.

3) Organisational and financial aspects

Coordination and organisational structures created/assigned

A steering committee and a climate team have been set up to take care of the implementation of the city's climate plan.

Staff capacity allocated

Four persons are working full time on coordination of the implementation of the climate plan. On top of this around 35 project managers are working (some of them part time) on specific projects in the climate plan.

Involvement of stakeholders and citizens

The citizens, municipal employees and businesses are actively involved in realising the Climate plan through a number of citizen-oriented initiatives, public private partnerships, campaigns, strategies for energy efficient purchasing etc.

W części szablonu SEAP zatytułowanej „Ogólna strategia” należy wprowadzić informacje na temat ogólnej strategii miasta oraz aspektów organizacyjnych i finansowych.



10 głównych zasad

10. Przedłożenie SEAP i wypełnienie szablonu

Sygnatariusze Porozumienia zobowiązują się do przedłożenia SEAP *w ciągu roku od dnia podpisania Porozumienia*. SEAP należy przesłać w języku narodowym (lub angielskim) za pośrednictwem strony internetowej Porozumienia Burmistrzów, jak również należy wypełnić w języku angielskim szablony SEAP dostępny on-line.

Szablony powinny zostać wypełnione z odpowiednim poziomem szczegółowości i powinny odzwierciedlać zawartość SEAP.

Na stronie internetowej Porozumienia znajduje się dokument zawierający szczegółowe instrukcje dot. wypełniania szablonu.



Sustainable Energy Action Plan Submission

Save a draft of your SEAP template:

Modifications to the SEAP template are possible at any time by clicking on the "Save" buttons - you

Submit your SEAP template & your action plan:

STEP 2: submit your full Sustainable Energy Action Plan [in your national language]

Press **this button** to submit your Sustainable Energy Action Plan.

By clicking on this button, you will be requested to send an e-mail. Thank you for enclosing your Sus

Note:

Should this not work, please send the file in a pdf-format to

JRC-SEAP@ec.europa.eu, SEAP@eumayors.eu

Thank you.

You can add here your comments:

A large, empty rectangular text area with a thin border, intended for users to enter their comments.

Add comment

Proceed without comment

**Gdy SEAP zostanie już
zatwierdzony a dane
wprowadzone do szablonu,
kliknij przycisk „SEAP
Submission” („Złożenie
SEAP”).**



Po złożeniu SEAP
Sygnatariusze
otrzymają informację
zwrotną.

Skrót SEAP-u zostanie
opublikowany na
stronie internetowej
Porozumienia
Burmistrzów

European Commission
Energy

European Commission > Covenant of Mayors > Covenant cities > Finland > Tampere > SEAP

 Providing visibility and support to signatory cities

City
Tampere

Signatory profile | **Sustainable Energy Action Plan** | Benchmarks of Excellence

Tampere Sustainable Energy Action Plan

Date of formal approval: 14 December 2009

Overall CO₂ emission reduction target: **-30 % by 2020**

Key results of the Baseline Emission Inventory

Base year: 1990

Final energy consumption per sector in 1990 (MWh)

Sector	Renewables	Fossil Fuels	Heat & cold	Electricity
Building	0	0	0	0
Transport	0	1	1	0
TOTAL	0	2	2	0

CO₂ equivalent emissions per sector in 1990 (t)

Sector	CO ₂ equivalent emissions (t)
Building	0
Transport	1
TOTAL	2

Key elements of the SEAP

Expected CO₂ equivalent reduction per sector (t) in 2020 from the 1990 level

Sector	Expected CO ₂ equivalent reduction (t)
Transport	25000 tons
Buildings, equipment, facilities & industries	9000 tons
Local energy production (electricity & heat/cold)	280000 tons

COMO's selection of key actions

Selection based on the originality, efficiency and replication potential of the actions planned by Tampere.

Test comment 2/2/2010

CO₂ equivalent emissions per sector (t) – basis, achievement and expectations

Sector	1990	2005	2020
Building	0	0	0
Transport	1	1	1
Local energy	2	2	2

CO₂ target per sector:

Sector	Target
Building	-1 % by 2020
Transport	-9 % by 2020
Local energy	-56 % by 2020

Link to the SEAP website:

This webpage is based on the SEAP template that the Covenant signatory has completed when submitting its full SEAP.

Disclaimer:
The sole responsibility for the content of this website lies with the authors. It does not reflect the opinion of the European Communities. The European Commission is not responsible for any use that may be made of the information contained therein.

Last update : 2010-02-11 19:12:26 | Top

Sustainable energy action plan of Nitra city until 2020

Date of formal approval: 17 June 2010

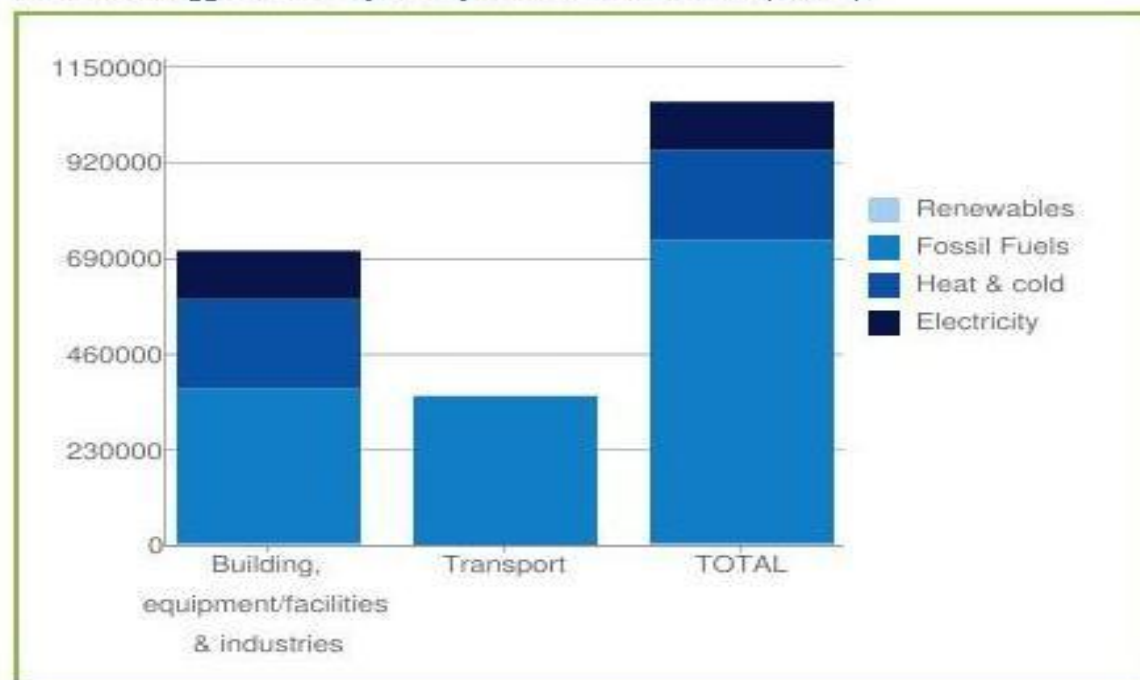
**Overall CO₂ emission
reduction target:**

**-21 %
by 2020**

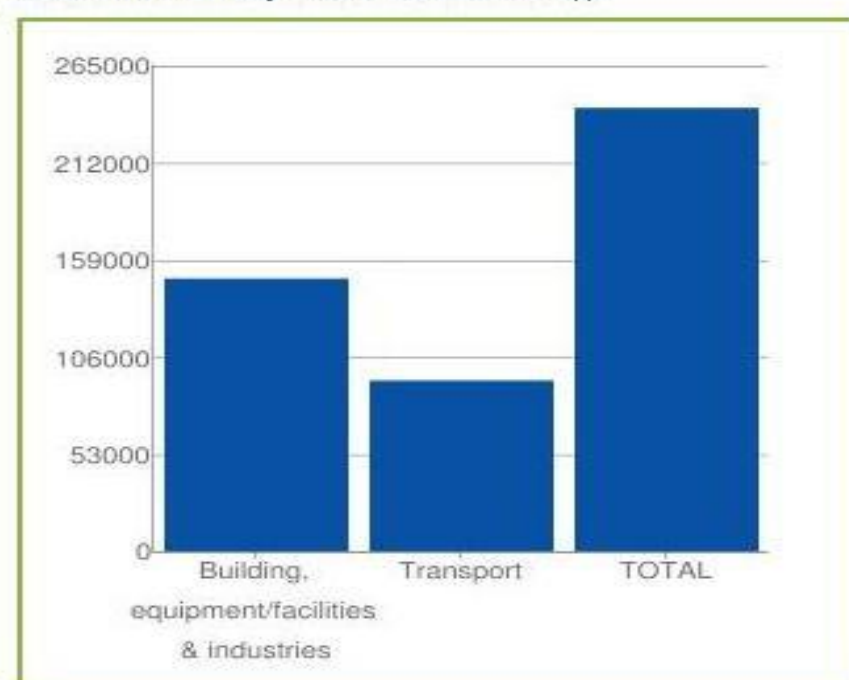
Key results of the Baseline Emission Inventory

Base year: 2005

Final energy consumption per sector in 2005 (MWh)



CO₂ emissions per sector in 2005 (t)





Nitra (SK)

Key elements of the SEAP

Expected CO₂ reduction per field of action (t) in 2020 from the 2005 level



Transport
26604 tons



Buildings, equipment,
facilities & industries
19994 tons



Local energy production
(electricity & heat/cold)
4359 tons

COMO's selection of key actions

Example of key actions that **Nitra.** intends to implement in order to reduce its CO₂ emissions.

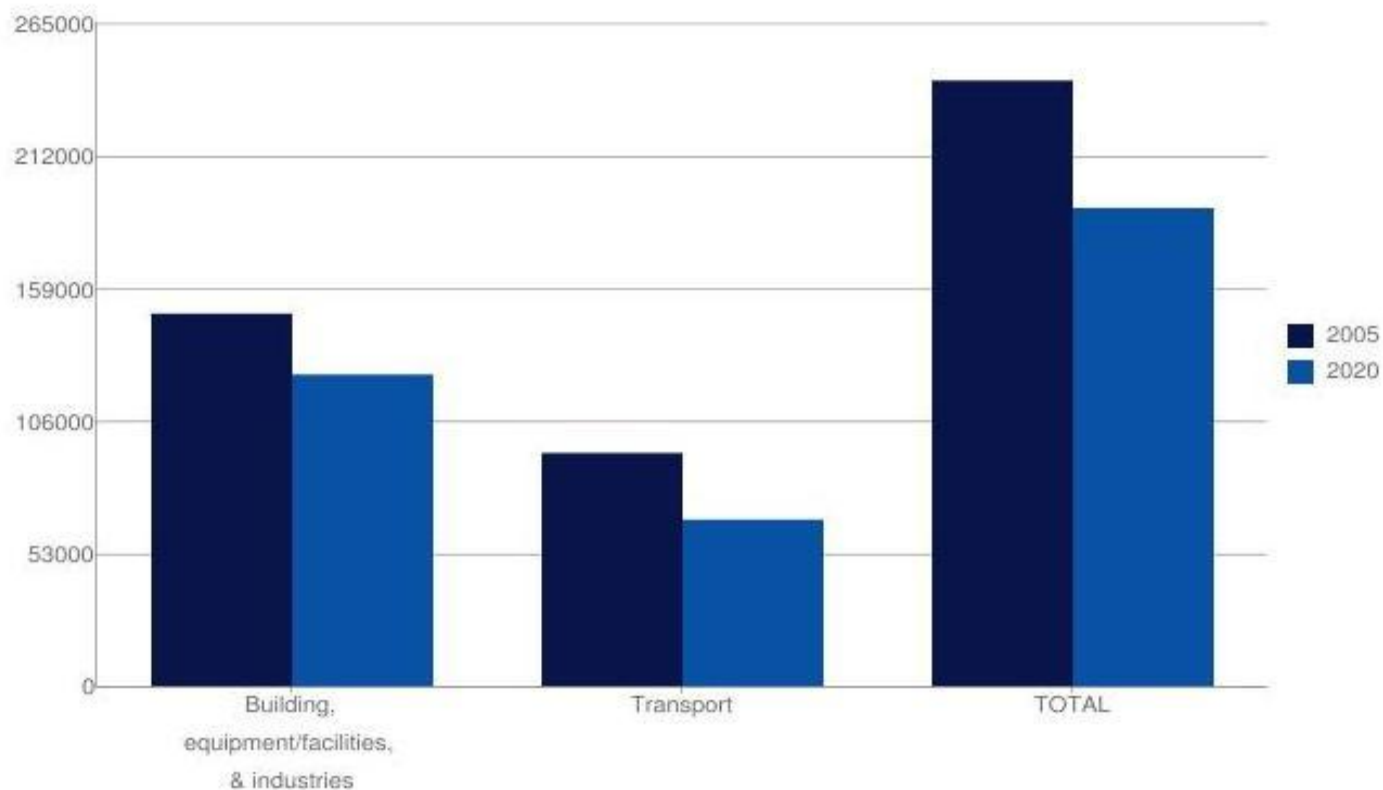
The SEAP of the city of Nitra is an ambitious and comprehensive plan that is intended to lead to a 21% reduction of CO₂ emissions in 2020 compared to 2005. A large number of measures are planned in all recommended key sectors of activity. Our selection of key actions is the following:

- Establishment of tax bonus for households when they submit energy certificate and achieve specified level of energy efficiency
- Development of cycling routes in the city
- Renovation of the district heating system



Nitra (SK)

CO₂ emissions per sector (t) – basis, achievement and expectations



CO₂ target
per sector:

-16 %

by 2020

-29 %

by 2020

-21 %

by 2020



Katalog SEAP-ów dostępny on-line na stronie: www.eumayors.eu



Tackling climate change
in a coherent way



Local SEAPs

Porto

Overall CO₂ emission reduction target: **-45 %** by 2020

Date of formal approval: 26 October 2010

[view more](#)

Vitoria - Gasteiz

Overall CO₂ emission reduction target: **-26 %** by 2020

Date of formal approval: 23 July 2010

[view more](#)

Genova

Overall CO₂ emission reduction target: **-23 %** by 2020

Date of formal approval: 05 August 2010

[view more](#)

Växjö

Overall CO₂ emission reduction target (per capita): **-65 %** by 2020

Date of formal approval: 01 April 2008

[view more](#)

Nitra

Overall CO₂ emission reduction target: **-21 %** by 2020

Date of formal approval: 17 June 2010

[view more](#)



4. Przykłady