

1550 **M. ANDRÉ MARC CHARBONNEAU :**

Écoutez, c'est difficile de répondre à une question du tac au tac comme ça, ça demande des analyses, des études évidemment. Mais ce que je peux vous dire c'est la détermination des gens impliqués dans le projet à ce que ce projet-là voit le jour et depuis le début des discussions autant avec la Ville de Montréal que l'arrondissement Pierrefonds-Roxboro, les promoteurs développeurs ont toujours été extrêmement sensibles aux demandes de la Ville centre et de l'arrondissement et que sans vouloir me commettre d'aucune façon, je serais prêt à vous dire cependant que je suis tout à fait certain qu'il va avoir une ouverture d'esprit et puis les discussions vont continuer dans le même sens qu'elles ont toujours eu lieu à savoir que c'est un projet qui mérite d'être fait et pour le réaliser, il faut avoir l'ouverture d'esprit nécessaire ce qu'on a manifesté depuis le tout début.

1565 **LE COMMISSAIRE WOLFE :**

Merci.

1565 **LA PRÉSIDENTE :**

Merci Monsieur Charbonneau.

1570 **M. ANDRÉ MARC CHARBONNEAU :**

Merci beaucoup.

1575 **LA PRÉSIDENTE :**

Alors on s'arrêterait pour une pause d'une quinzaine de minutes. Merci.

PAUSE ET REPRISE

1580 **LA PRÉSIDENTE :**

On va reprendre. Alors je vois que monsieur Jaeger est déjà assis. Il est prêt à nous présenter son mémoire. Allez-y.

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1590 **M. JOCHEN JAEGER :**

Merci beaucoup. Merci pour l'occasion de présenter notre travail ici. Je m'appelle Jochen Jaeger and I will speak in English because I'm a bit faster, if that's Okay.

1595 **LA PRÉSIDENTE :**

Fine.

1600 **M. JOCHEN JAEGER :**

So I will present to you the development of urban areas in Montreal over the last 60 years. And we found an exponential increase of urban sprawl and I want to show the results to you.

1605 So this is what Montreal looks like from above. So you see a lot of residential areas at pretty low density and some green areas that remains, some golf courses, this is another photo that a colleague of mine took so we also see a lot of commercial areas that's pretty low density.

1610 At that time, Master student, Naghmeh Nazarnia within the room as a co-author of my presentations, studied urban sprawl in Montreal and Québec on two scales for the area and this CMA. And we want to also show you our results for District 20 which is Pierrefonds-Roxboro.

1615 I will show you first the results of the built-up areas in Montreal Census Metropolitan area because I think this background information is important for any decisions of future urban development in Montreal.

1620 The red line shows the district and all the black areas are built-up areas that she digitized from maps, historic maps of Montreal. So, this is 1951, this is 1971, this 1986, this is 1996 and this is 2011. We also want to show you this development zooming into Roxboro-Pierrefonds. This is 1951, so you'll see very few built-up areas. This is 1971, this is 1986, this is 1996 and this is 2011.

We have not done an analysis for 2016/17 yet because the data are not yet available. So this is just the direct comparison between 1951 and 2011. This should be kept in mind.

1625 We have developed a message to measure urban sprawl. It has three components. The first is the amount of built-up areas so on the right side, you see the more urban areas there is or built-up areas the more you would have urban sprawl that's a component that everybody agrees on.

1630 Then, the second one is the spatial arrangements so the dispersion of the built-up areas if it's all dispersed over the entire landscape, the landscape would be considered more effected by urban sprawl than having everything compact in the form of a circle and the third component is the land of take per person. So if you have a high density as on the left side, like in the downtown areas of cities that would not be considered urban sprawl because land of take per person is very low.

1635 So we have these three components and we combined them. This is all published in various journals so I just want to show you the results and to remind you what's the definition of urban sprawl.

1640 We use the definition at urban sprawl can be visually perceived in a landscape. That means the landscape is the more sprawled, the more it is promoted by buildings and then we have these three components, the decree of urban sprawl is higher when first more areas is built-up. Second the buildings are more dispersed in the landscape and third the utilisation intensity of built-up areas is lower.

1645 So we don't mix up causes and consequences of urban sprawl this is a phenomenon of sprawl itself but distinguish it from them which is not always done very correctly in the literature.

1650 These are the results. This is the result for Montreal Census Metropolitan Area with the values from 1951 to 2011. And you see very clearly that in 1951 there was basically no urban sprawl, then urban sprawl increased and then it increased faster and then it increased even faster and then it increased even faster. So this is basically an exponential increase in urban sprawl in Montreal.

1655 It was interesting to compare this with Québec and also with a European City we chose Zurich from Switzerland and we expected to see similar patterns here from Montreal as we see in many European cities where the strongest increases happened in the 50's and 60's when we still felt everything can be done by cars but soon in Europe at least they realized that this is not possible and in most cities urban sprawl has still increased but not as fast any more. So the increase in urban sprawl has slowed down. But we were very surprised to see in Montreal that the fastest increases in urban sprawl happened in the last 25 years.

1665 Some people would say: well this is natural because it has been caused by more inhabitants. Well you can look at the increase inhabitants that we have everything scaled the results of 1986 that would be shown as 100% and you see an increase in the number of inhabitants for the Montreal CMA and also for the Island of Montreal. If you compare this with the increase overtime in the built-up areas, you see that the built-up areas already have increased much faster than the

number of inhabitants. And when you look at the numbers of urban sprawl, then you see that urban sprawl has increased even faster.

1670 So the inhabitants are only a very small part of the reason why urban sprawl has increased. It's much more that every person is using much more built-up areas per person and then the dispersion that has increased as well.

1675 There are many more data in our paper available for example about the densities so basically in Montreal Island, the utilization density has been reduced by 50% over the last 60 years. In Zurich, it has also decreased a bit but far less.

1680 So just to summarize the most important findings, urban sprawl on the Island of Montreal has increased 29 fold between 1971 until 2011 in an exponential manner. Urban sprawl in Montreal has never before increased as fast as it has increased in the last 20 years and is increasing today. And urban sprawl in Montreal when we look at all these results appears to be out of control.

1685 There would be another long presentation possible about all the negative effects of urban sprawl. I'm using just here the results of a study by the European Environment Agency which was published just a year ago, it's called: Urban Sprawl in Europe. And there is a big table with all the effects that they have brought together including the sources where you find more information so one big section of this table are all the environmental impacts, losing soil ceiling and effects on biodiversity, the flow are finalized here instead of biodiversity. That is particularly relevant as you know in Pierrefonds and there are also economic impacts and social impacts in poverty of life so I won't go through all of these, these are available, the report is available on the line for free.

1690 This is the website [www.eea for](http://www.eea.europa.eu) EuropeanEnvironmentAgency.Europe and then publication and so on you will find this easily.

1695 The question that is how does this relate to sustainability? This is an illustration by Frederick Fester, Professor of Biology in Munich where he explains visually why constant growth of the same kind is not a sustainable strategy and I think we are at this point in many cities in North America. We would have to, if we want to continue in some form of growth switch to a different kind of growth and this is really nice illustration some kind of metamorphism needed but not just more of the same.

1700 And, when you look at biological systems, it's very clear that no biological system that lives long can grow forever. The only growth that is possible is logistic growth so that is growth that approximates on some topically a maximum at some point. You see the specific growth of every person, we don't continue growing for the rest of our life because it wouldn't be possible. There's

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one example though where a certain system still grows and grows and that's cancer and of course that cannot live forever because it kills the organism that is carrying cancer.

1710 So I would like to refer to German philosopher who once wrote: "he who wants to act responsibly needs to know what he does." He needs to be able to see the potential consequences of his actions. An enlighten reason would be a reason that recognizes its own possibilities and limitations. It would be a reason that does not do everything one can do but has recognized that only such an acting is sensible that sees its own consequences within our given limitations and can only in this way become responsible acting.

1715 What would this mean for urban sprawl, well here's a map of urban sprawl in Montreal. So, you see in large parts of the downtown area that are shown in green here indicating that there are not sprawled, density is high enough, that is not considered as urban sprawl but large parts in the western parts and eastern part of island and all of others sprawled. We can show this as a different scale. This is the district level as compared to the census treck that were shown in the previous maps.

1720 When we show urban sprawl values for all the districts in Montreal, you would identify Pierrefonds-Roxboro as number 8 of the 8th most sprawled district of Montreal.

1725 There are other parts of Montreal like the least sprawled, there's basically no sprawl in Ville-Marie and there's no sprawl in le Plateau Mont-Royal, there's no sprawl in Côte-des-Neiges/Notre-Dame-de-Grâce which means those people who are opposed to increasing density arguing that quality of live would be negatively affected can easily be proven wrong because as you all know, le Plateau Mont-Royal is one of the neighbourhoods with the highest quality of life in Montreal. Increase of density does not mean reduced quality of live if it's done well.

1730 When you look at the maps, it is very obvious that the proposed urban development of 185 hectares in addition in Pierrefonds-Roxboro would very likely increase urban sprawl significantly. We would be happy to do the calculations. We would just need the shape file of the new area developed and an estimate of the number of people living and working in this area and we would be happy to calculate those numbers.

1735 In Switzerland, urban sprawl has been a problem for some time as well and talking about Switzerland because I have done a project in Switzerland before. And I think it was very hopeful that politicians at the highest level of Switzerland have publicly stated that urban sprawl is an unsolved problem. So the Présidente de la Confédération, la Chancelière de la Confédération Suisse ont écrit l'étalement urbain et la destruction des terres agricoles sont des problèmes non résolus de l'aménagement du territoire, because when they state this, we can all work on solutions.

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There are quite a lot of proposals on the table out to limit urban sprawl. I don't have enough time to discuss each of them but if I were to summarize them, I would say use land sparingly, that's what we have to do.

1750 Just an example here what this may mean, one eight years to establish quantitative limits to curtail urban sprawl, we have limits to water pollution, we have limits to air pollution, we have noise limits, why not establish limits to limit urban sprawl. We are working on it right now for Switzerland to propose such limits.

1755 And other ideas to establish it is set of suitable indicators for controlling urban sprawl in the future quantitatively and this is one citation from our book. I have a copy here, I would be happy to give you copy "Reduction of land of take per inhabitant and concentration of existing settlement areas without extending the borders of each settlement" is basically the overall idea. This is the book. I call it the Canadian Edition because it's translated into French and English in the same book.

1760 I also want to give ideas that sometimes thinking outside of the box maybe helpful. This is the La Banque Alternative Suisse that is using our message to assess new construction projects regarding the contribution to urban sprawl and Switzerland is called Mittagage, so that's why it's written La Banque Alternative engage la lutte contre le mittage. So here we would say étalement urbain.

1765 And they assess these buildings and when these new constructions would contribute a lot to urban sprawl, they don't give money to these projects. So banks have a certain responsibility or can have a certain responsibility if they decide to do so.

1770 This is what the Banque Alternative Suisse puts on their website to attract people who want to invest their money responsibly. It's all available on line and this was already in 2012. This is the contact address.

1775 And also I'm giving you this notice pour les praticiens, where we show how the method works. It would be nice to write such a paper about Montreal using our results to explain how urban sprawl has developed and what possible ways of action would be to slow down urban sprawl.

1780 This is our paper where all the results are presented and The Pier Review Journal ecological indicators. And my colleague, Naghme Nazarnia, has already presented some of these results two years ago in November when the hearings were about Meadowbrook so some of these maps there you have seen there already.

1785 And this is the end of my presentation.

LA PRÉSIDENTE :

Thank you.

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LE COMMISSAIRE WOLFE :

J'ai deux questions. Maybe it's too simple a question but I noticed that Hampstead, and this is the preamble, I noticed that Hampstead was considered quite sprawl and Côte St. Luke was considered very low in sprawl, can you explain that is that just because of high rises?

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M. JOCHEN JAEGER :

No. Hampstead, the method measures urban sprawl of a certain landscape so we have to take the boundaries of Hampstead and ask how much is the area permeated by buildings and basically there's no area left in Hampstead that is without buildings so it's covered by barriers a lot and all that urban area is low density. So there's no relief through the waiting of highly densely populated areas there. So it covers everything, it's like the worst case that can basically happen.

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LE COMMISSAIRE WOLFE :

Okay.

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M. JOCHEN JAEGER :

And in Côte St. Luc, you have somewhat green spaces, open areas, like parts that are not covered and in some areas you have a little higher density.

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LE COMMISSAIRE WOLFE :

So the 35 drawings it's per hectare as proposed, as described in the City's proposal that would be highly sprawled?

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M. JOCHEN JAEGER :

That would be still too low to really have in the weighting function effect that it would be high density where it doesn't count as urban sprawl anymore.

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LE COMMISSAIRE WOLFE :

Could you propose a number of what would be a density that would be more.

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M. JOCHEN JAEGER :

I can look that up, yes. I wouldn't want to say something without being sure that I said the correct number but it could...

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LE COMMISSAIRE WOLFE :

If you could provide that yes that would be helpful.

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M. JOCHEN JAEGER :

Yes. I will.

LE COMMISSAIRE WOLFE :

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The other question is a more theoretical one, Nadia, est-ce que vous avez une autre question?

LA COMMISSAIRE RAPHAËL :

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Non.

LE COMMISSAIRE WOLFE :

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Non. Si vous le permettez, oui. I'm not sure if this is within your level of expertise, but many people feel that retail that we are oversupplied with retail shopping malls and shopping centers of all scales, because of the shift towards purchasing things on line, do you have any information about that? It's not exactly sprawl but I just thought.

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M. JOCHEN JAEGER :

You're right, I can't say anything about that.

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LE COMMISSAIRE WOLFE :

Okay.

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M. JOCHEN JAEGER :

I would rather, but that's very personal opinion I would rather try to keep as much of these retail shops rather than having people buy things on line but it's a separate say.

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LE COMMISSAIRE WOLFE :

Other reality.

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M. JOCHEN JAEGER :

Yes.

LE COMMISSAIRE WOLFE :

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Very different.

M. JOCHEN JAEGER :

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I know unfortunately.

LE COMMISSAIRE WOLFE :

Thank you.

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LA PRÉSIDENTE :

I have a question. How do you compare the urban sprawl in Montreal with that of other cities like Vancouver or Toronto?

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M. JOCHEN JAEGER :

Yes.

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LA PRÉSIDENTE :

Do you have information on it, ballpark figures?

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M. JOCHEN JAEGER :

I would like to do that. The thing is so far we did not have funding for the study at all so basically my parents paid for it.

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I would very much like to do more analysis of urban sprawl on other parts of Canada and it should be more easily possible now that at the Federal level, they have been released new data about built-up areas in Canada so at least for 3 time steps but we haven't done that yet and I'm still in the process of finding funding for doing this. I have a new student who is interested in doing that.

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However, for Vancouver, in particular, one student in the JAY-S class did that for Vancouver and all he wanted to find out is whether the increase of urban sprawl in Vancouver has increased as well as in Montreal or has been slower. And he found that it has been a little slower.

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LA PRÉSIDENTE :

In Vancouver?

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M. JOCHEN JAEGER :

In Vancouver.

LA PRÉSIDENTE :

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Yes.

M. JOCHEN JAEGER :

In Vancouver, because in Montreal we see it's just getting faster and faster each time step and in Vancouver, it has increased but at a lower slope.

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LA PRÉSIDENTE :

Yes. And as well for the development of transportation oriented development?

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M. JOCHEN JAEGER :

Yes.

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LA PRÉSIDENTE :

Do you have information of how Montreal is positioned in regards of other Canadian cities?

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M. JOCHEN JAEGER :

I would probably look in the document by the Neptis Foundation, Marcy Birshfield in Toronto has done studies like that but I'm not sure if Montreal is part of that. I know for Toronto and Vancouver they have compared that but for Montreal, I don't know. I don't know.

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LA PRÉSIDENTE :

Okay. Fine.

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M. JOCHEN JAEGER :

But I know that Nick Luka from McGill University has done a study for Montreal where there is potential for densification and that was very interesting and the City of Montreal has it but they never published it so it's has disappeared in a drawer somewhere. That's what he told me.

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LA PRÉSIDENTE :

There is one. Okay.

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M. JOCHEN JAEGER :

Yes. But I don't know how many years ago that was but it would be interesting to look at that.

LE COMMISSAIRE WOLFE ;

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So he did not publish it?

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M. JOCHEN JAEGER :

1990 No. No. I don't know, maybe he wasn't allowed to publish it or something there was no interest from the City to spread this information.

LA PRÉSIDENTE :

1995 And are you, you give example of measures that were decided in Switzerland...

M. JOCHEN JAEGER :

Yes.

2000 **LA PRÉSIDENTE :**

...To counter the urban sprawl. Are you aware of such measures in Canada or in United States? Could it be a different...

2005 **M. JOCHEN JAEGER :**

2010 Yes, yes. I'm speaking to my colleague Greg Townsend a lot he's from Vancouver and he's always comparing Vancouver with Montreal and he tells me - he keeps telling me that Vancouver has put various measures in place to slow down urban sprawl that's why we expect that the increase in urban sprawl in Vancouver has not accelerated but decelerated, yes.

I can ask him for more information, what measures they exactly put in place.

LA PRÉSIDENTE :

2015 Fine. If you can find some and send us this information.

M. JOCHEN JAEGER :

2020 Yes, I will.

LA PRÉSIDENTE :

2025 To our colleague Stéphanie here.

M. JOCHEN JAEGER :

Yes.

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LA PRÉSIDENTE :

Thank you.

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M. JOCHEN JAEGER :

I will be happy to do that. And I don't want to say that Europe is fine and there's no sprawl, it's quite the opposite.

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LA PRÉSIDENTE :

No, no.

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M. JOCHEN JAEGER :

Europe has a big problem with urban sprawl and all the cities in Europe have a problem of urban sprawl even those in Eastern Germany where people are disappearing, where there's a reduction of human population because the density is therefore decreasing and then urban sprawl is still decreasing because they are very rarely destroying the buildings that are not used anymore.

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LA PRÉSIDENTE :

But they have one factor that there's less land.

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M. JOCHEN JAEGER :

There's less what?

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LA PRÉSIDENTE :

Less land.

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M. JOCHEN JAEGER :

Yes, in particular in Switzerland because...

LA PRÉSIDENTE :

You know that helps to contain the sprawl.

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M. JOCHEN JAEGER :

Yes, they have more pressure it seems there is still an awareness of the problem still needs to increase in Canada much more but even in Europe many people are not really aware that urban sprawl is an issue.

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LA PRÉSIDENTE :

So thank you very much.

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M. JOCHEN JAEGER :

My pleasure.

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LA PRÉSIDENTE :

Alors j'inviterais maintenant monsieur Perel. Mister Perel please. Good afternoon.

MR. SHLOIME PEREL :

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I will show a video, the title of my, sorry. Yes, the title of my presentation is : In Wilderness is the preservation of the World", for the preservation of the entire wet meadows nature area of West Pierrefonds.

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And this video is in that area. One of the greatest truths has only eight words; in wildness is the preservation of the world. This is what Henry David Thoreau wrote in his essay working. We usually act as though we are totally separated from the earth as though our continuity has a species isn't related to that of the earth and all its living things.

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This is relevant to the future of the Pierrefonds nature area about which we're talking. I am advocating contrary to many interests and the Coderre administration that this entire area and this biodiversity be totally preserved. That none of us pristine wetlands trees and plants, migratory birds and other animal habitat be destroyed.