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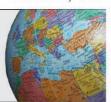
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SFPR claims Feds policy is discrimatory

Harleen Kaur Dhillon Staff Reporter

Rachel Thevenard has spent years fighting for equality and believes a new Feds policy discriminates Palestinian students.

After the Environment Resource Studies and Geomatics student at UW helped plan and narrowly lost a referendum to endorse Boycott Divestment in 2016, Feds passed an amendment to Policy 48 (P48) to make sure the boycott could never be implemented.

"It's unprecedented in that there's no other referendum that happened on this campus where Student Council then feels the need to create this policy that if any future referendum were to be created on this issue, whatever the last result is still stands years later," she said. "How that's democratic really fails me."

In response to a 2016 referendum on severing ties with militarized Israeli universities, on Sept. 18, Student Council passed the appeal to amend P48. Now, referenda that meet the definition of discrimination set in P48 will not be ratified.

"Whereas a referendum was held on January 28, 2016 to endorse the Boycott, Divestment, and Sanctions movement, which promotes discrimination on the basis of national origin, and to "Sever Ties." Whereas this referendum failed by a vote of 2329 against (56.36 per cent) to 1803 in favour (43.63 per cent), a margin of more than twelve percentage points, with students rejecting calls to sever academic ties with Israeli institutions..." P48 states.

Thevenard is part of the UW Students for Palestinian Rights (SFPR), a group advocating self-determination of Palestinian people and the recognition that they are Indigenous people of Palestine. SFPR also supports the struggle against Israeli colonialism, but clarifies that they are not against Jewish people, only the imperialism of Israel.

The SFPR proposed the severance of ties with five Israeli universities and ran the referendum in 2016. It was cited specifically in P48

"[Be it further resolved that] the Federation of Students will not adopt stances or policy in support of the promotion of discrimination, violation of academic freedoms, severance of academic or institutional relationships, and marginalization of student communities," P48 states.

"We believe that the students should have [...] the ability to form their own opinions and the ability to express them," claims Richard Wu, President of the Feds.

Thavenard believes P48 is doing the opposite.

"What if, in ten years the culture shifts and students want to boycott and want to support the Palestinian people?" she asked.

Jana Omar, a Fine Arts student and member of the SFPR, said the policy makes it difficult to have a referendum.

"I would like to highlight that, that is the intention. This is preventing certain students from speaking. It's Palestinian students and those who stand for the Palestinian cause," Omar said.

Wu doesn't believe that is the case. Students can make their case to council and councillors can chose to take the issue further.

"If councillors really want to see a motion to ratify a referendum [...] they can still do that under parliamentary procedure," Wu said.

Omar doesn't believe councillors are always held accountable.

"We already see huge gaps in the ways that councillors are held accountable to actually consult their constituents. We saw that in this policy vote, we've seen it again and again in council, there's no mechanism in Feds that councillors are actually consulting the students they're supposed to be representing...no accountability there," Omar said.

Wu defended the process and said any student can run for council to make the changes they want to see, but Omar is skeptical.

"The reality is that people don't want to be on council - council as an unpaid volunteer role sucks," he said.

Thevenard understands why students don't always get engaged in the democratic process. The prospect of long hours, weekend work, and a lack of social life are daunting.

ing.

"A lot of seats go unclaimed and so what you have is people who want the power can easily claim the power [and] will likely run unopposed," Thevenard said. "Students who are studying, and perhaps working, and are also focused on human rights are not necessarily the same demographic as the people who want power."

Although the referendum held by SFPR in 2016 did not meet the discrimination criteria of the old or the new policy, it was still denied

It is also specifically mentioned in P48, but the possibility of conversation with Student Council, as it stands, is slim.

Thevenard and Omar were present at the Council Meeting on September 18th.

"One of [the councillors] was making an argument that was completely in line with our proposal and it sounded like a total contradiction to his point... it was basically like how council shouldn't have any hand in the way that student demo plays out and how students discuss foreign affairs... it completely sounded like an ignorant comment coming from someone who didn't read [the information]," Omar said.

P48 denies the political nature of interna-

tional academic ties.

"The Federation of Students opposes the politicization of international academic agreements, educational exchanges, and work-related study," P48 states.

Thanenard believes choosing to engage the issue has brought them into the realm of international politics.

"[UW] has gone out of its way to get involved in foreign affairs, [...] so the idea that this is somehow apolitical is absurd," she said

She beleives P48 confiscates the rights of many and defies the most basic principle of democracy: everyone has an equal vote.

"[The] university has already been politicized so this is what is a part of the issue and [...] there is a question of student democracy, like do you or do you not believe that students should have the right to discuss this, whatever their opinion is," Omar said. "Why is it that councillors believe they should create red line?"



Rachel Thevenard, an Environment Resource Studies and Geomatics student at UW and a member of SFPR, opposes the new Policy 48.

POLICE BRIEFS

A 28-year-old male was arrested in Connected with two sexual assaults in an apartment elevator.

On September 5, and October 4, Waterloo Regional Police were called after two victims were sexually assaulted in an elevator at an apartment building on Mooregate Crescent in Kitchener.

In both incidents, a male entered the elevator with a female and, once inside, allegedly sexually assaulted the victims.

The male was arrested on October 5 in connection to these incidents. He was

charged with two counts of sexual assault, sexual interference and forcible confinement

Waterloo Regional Police want to identify and speak to this man in connection to a sexual assault. On October 6 a young girl was approached by a male and allegedly sexually assaulted while standing near a gaming machine inside a department store on The Boardwalk in Kichener. The male left the store and walked to a nearby bus terminal. He is described as male, white, around 55-years-old, five-feet seven-inches

tall, with a thin build and grey and brown hair. He was wearing black-rimmed glasses and a grey hoodie. Anyone with information is asked to call police.



Police are searching for this man.

CORRECTION

In the articles pulished Sept. 19, titled "Relegious leaders gather for 38th year" and "Waterloo Recreation has free classes," it was stated that the photos were taken by Harleen Kaur Dhillon. Imprint would like to amend the statement, and clarify that the photos were taken by Rishika Sinha.

Lime e-scooters enter Canada

E-scooters have arrived on campus at many locations for students to test

Farishteh Khan News Editor

alifornia-based company Lime is looking to join the Canadian market for the first time as it introduces electric scooters in Waterloo.

The program is being run in collaboration with the University of Waterloo, with the hopes that a successful trial in the city could encourage the spread of the company's influence to other parts of Canada, particularly Toronto.

Lime officially launched the project by rolling out e-scooters on Oct. 2, 2018. There are no docking stations from where to pick up the e-scooters. Rather, users download the Lime app which directs them to nearby e-scooters using GPS technology, generally found next to bike stands or along the roads. It costs a baseline of \$1 to unlock the scooters and then approximately \$0.30 a minute

At the moment, this project limits the use of these e-scooters from 7 a.m. to 9 p.m. on a 6.5 km route that includes Waterloo Park with the University of Waterloo's main campus and connects with David Johnston Research and Technology Park. Lime is in the midst of grappling with Canadian legislation regarding the categorization of the vehicle, though most agree that it aligns most closely to the bike subcategory.

Currently the conditions surrounding

use of the scooters are such that they can be used private roads within the prescribed area, with emphasis on encouraging the use of helmets. The speed limit set on usage is 24 km/h, such that it mimics that of bicy-

"Under the province of Ontario's Highway Traffic Act, vehicles like e-scooters are considered not legal for use on city/public roads, including within bike lanes," Eric Holmes, a Toronto city spokesperson said.

Among other technical questions raised which may halt the success of the venture is the fact that these e-scooters are not made to withstand the harsh, snowy winters of southern Canada.

The pilot project here in Waterloo is available from now until it snows this winter, and then will be made open to the public again once winter ends next year. It remains to be seen whether this could stunt the popularity of the vehicle as an efficient means of transportation for the average Canadian.

However, Lime e-scooters are predicted to become quite popular, as it aligns with Waterloo's tech-positive environment.

"When I first visited here, what sort of stood out to me immediately is the ingrained tech environment that is built within Waterloo makes it an immediate city that would naturally be approached to these products," Nick Probst, Lime's manager of Midwest strategic development said.

He also laid out the statistics for usage of the product so far: typically, on a successful day, bikes see one to two rides on average,



Lime e-scooter waiting for riders at Columbia and Hagey Blvd. bus stop.

whereas e-scooters are seeing four to five.

'We thought that the usage would be high. I don't think we necessarily anticipated how high it would be," he explained.

The popularity of the e-scooters may be attributed in part to the ease for everyday travelers. They require less effort than bikes, which require pedaling, leading to less physical exertion which seems appealing in the early mornings or at the end of a long day during peak usage. This, coupled with crossovers from their popularity in the U.S., has given e-scooters here in Waterloo a solid head start on establishing a base in

Over the course of the pilot, mobility patterns will be assessed, and the system will be adjusted accordingly to better meet the needs of Canadian citizens. For the time being, as Lime sorts out the creases in the fine print, there is a positive outlook echoing through the city as it embraces its role as the launching pad for innovation.

"Competition isn't discouraged in Waterloo, it's one of our hallmarks," Whaley said.

"I say, welcome Lime."

UW in battle over clean energy

Sean Menezes Reporter

The University of Waterloo's renowned ■ startup incubator Velocity Garage has recently caused legal strife between the university and a tech startup called Salient

The dispute concerns the rights to a new product of Salient that allows for zinc ion batteries to be charged and reused thousands of times.

The University of Waterloo is currently suing the startup with the claim to ownership of any patented technology created through Velocity.

Nick Manning, the Associate Vice President of Communications at the University of Waterloo describes the lawsuit against Salient as a "last resort" to gain ownership of the new technology. Although the university seeks ownership, they argue that licensing for the patent belongs to Argonne

National Laboratory, as they provided capital that initially funded Salient.

In addition, the University of Waterloo seeks \$600,000 in damages from Salient, which is rationalized by Manning as the university's obligation to protect stakeholders in any legally binding contracts.

The university claims that Velocity is the "most productive incubator in Canada", referring to its ability to provide workspace, equipment, and advisors to startups. Moreover, Velocity promises full intellectual property rights to its inventors. This promise is the heart of Salient's issue with the university's lawsuit.

Ryan Brown, CEO of Salient believes that the company owns the rights to its patented technology. Brown claims that the lawsuit violates the agreement between Salient and Velocity, stating his belief that Salient should have ownership of the invention.

'We simply want to be treated according to this promise," Brown says, referring to the university's claim that intellectual property belongs to the startup rather than the university itself.

As an alumnus of the University of Waterloo, Brown expresses his disappointment in the university's response to the dispute. "We thought that the school was really supportive of start-ups... It doesn't make us feel good about the school."

Since Waterloo is known as one of the leading centres for science and technology, the university hopes to resolve this issue as soon as possible, as any sort of problem with Velocity may dissuade a potential client from joining their program.

Although this dispute between the university and Salient dates back to 2015, Manning maintains the claim that the university seeks a "negotiated outcome." In addition, the university wishes to keep partnership with Salient, despite the ongoing conflict.

Salient also states their openness to a potential settlement, though Brown claims they would be ready if the case did go to court.



Velocity Garage at Waterloo.



Campus Question

See what students think about political topics

This Week: What do you think of mimium wage staying at \$14?





Alicia Osagie

3A, Honours Science Minor in Biology and Medical Physiology

"With the cost of living increasing, I think minimum wage should be going up accordingly."



Matt Macmillan

IA, Honours Arts and Business

"I think it's the right move. I think the minimum wage should go up, but at a slower pace, giving the market more time to adjust."



Savroop Mann

3B, Science and Business

"There's not that big of a difference between the \$14 it is now and the \$15 it's supposed to go up to so it doesn't matter all that much. [Also] the minimum wage going up would just raise the cost of living as a whole."



Jae Woo Jun

2A, Geomatics

"[The] price of everything increased when the minimum wage went up last time. I am personally okay with it staying at \$14."



Gillian Johnson

1A, Computer Science and BBA Double Degree

"It is not that big a deal that the minimum wage remains at \$14 as raising the wage to \$15 could make prices in stores increase to compensate for the increased cost to pay workers which ultimately means that the extra earnings does not make much of an im-

Trans Mountain Pipeline moving forward

Andrew Scheer recommends a quick action plan to get the pipeline in motion

The plan includes Indigenous

Harleen Kaur Dhillon Staff Reporter

ndrew Scheer, leader of Can-

ada's Conservative Party and Official Opposition announced a two-step plan on Sept. 24 for the federal government to begin construction of the Trans Mountain

consultations, an appeal of the federal court decision on August 30th, and Bill C-69 repeal to end

> The Federal Court of Appea decided that the National Energy Board (NEB) report used to approve the TMX Project was flawed. The federal government opted to not appeal the decision.

the shipping ban in British Co-

"After years of failing to deliver results on the Kinder Morgan Trans Mountain Expansion, Justin Trudeau and the Liberals still have no plan of action to get the pipeline completed," Scheer said in a press release.

"That's why today I am outlining steps Justin Trudeau should take immediately to get Trans Mountain built and announcing what a Conservative government will do to reverse Justin Trudeau's failed policies and make Canada a place where energy investments are encouraged."

"I have found that the Board erred by unjustifiably excluding project-related marine shipping

from the project's definition," Justice Eleanor R. Dawson wrote in the decision.

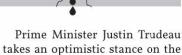
"Missing was a genuine and sustained effort to pursue meaningful, two-way dialogue," Dawson wrote about consultation with indigenous groups.

Amarjeet Sohi, Minister of Natural Resources released a statement on Sept. 21 about the government's plans to move forward.

"No relationship is more important to the government, and to Canada, than the one with Indigenous peoples.

We are pleased that the NEB will provide participant funding so that the views of indigenous groups are well represented in the Board's consideration of marine issues," Sohi said.

The government plans to provide the NEB with necessary tools to produce a thorough review which will address the concerns raised in the appeal.



ruling. "There is a glimmer of optimism to be had because if we do the consultations with Indigenous people properly, if we get the science right, we can move forward in the right way on this project and in other projects," Trudeau

Trudeau also brought to attention the fact that there will be more projects that will require consultations, research, and so on in the future where proper procedure would be needed.

"It's thinking about the longer term and not just this project right now that has to be at the front of mind; it's not just this project that matters, it's the future of resource development in Canada that is on my mind," he said.

For more information about the pipeline visit https://bit. ly/2OeERUB.



Gender equity at UW: President Hamdullahpur at impact summit

The progess we are seeing is important, but we have to keep moving forward

Harleen Kaur Dhillon Staff Reporter

nn Hathaway, the UN Women Global Goodwill Ambassador asked "Why is it always women who have to break through the glass ceiling? Where are the men, willing to throw boulders down through it?" at the beginning of the panel of university presidents from around the world. "They're right here," she said.

President Feridun Hamdullahpur was in New York on Sept. 26, representing the University of Waterloo at the UN HeForShe Impact 10x10x10 Summit. He joined influential dignitaries from around the world, including Queen Rania of Jordan, President Sauli Niinistö of Finland, and many more to institutions in the last year.

In 2015, the initiative set three goals: increasing female enrollment in STEM programs, increasing female faculty and staff, and increasing female academic and senior leadership.

President Hamdullahpur informed the Summit that UW has reached and exceeded all of the numerical goals set by the initiative. In addition, UW has also addressed the gender wage gap at the university. President Hamdullahpur told Hathaway, "we needed to understand the root cause [...] — our hiring practices. So we really needed to visit our hiring practices, bring conscious and unconscious bias training for every single hiring committee [...] by removing that bias. Not only did we open up the pathway to the

discuss the progress they had made in their university, we removed any possibility of UW which will be more welcoming for fepay inequality going forward."

President Hamdullahpur described the need for acknowledgement of the problem and recognition of the need for social change. "We needed to go across the university and get everybody involved [...] one change, one policy, will not bring the kind of social change, cultural change that we [need]." he said.

"Progress has been fantastic," President Hamdullahpur told Imprint. "[But] one thing we're not going to do is take the foot off the pedal."

Going forward, the President has recognized the need for new approaches to create long-lasting change. More than just reaching numerical goals, he recognizes the need for a change in culture and atmosphere at male students.

"I believe that the generation after me will benefit from this," he said. In this, President Hamdullahpur learned that he is not alone. "I am not the only one thinking that the world doesn't look right to me. I have always thought like this. [...] Now leaders are sharing this with me. It's very encouraging,"

President Hamdullahpur has drawn inspiration from his students and has identified the need to work with them to continue improving gender equity on campus. "it requires a system wide approach, it requires getting everybody involved, and that's exactly what we did."

For more information about UW Impact IOXIOXIO, visit https://uwaterloo.ca/heforshe/

Donna Strickland wins Nobel physics prize

UW's Dr. Strickland is the first woman to win the Nobel physics prize since 1963

Sarah Mazen Reporter

History was made on October 2nd at 5 a.m., when the University of Waterloo research received a call from nobelprize.org awarding Donna Strickland with this year's Nobel Prize in physics for groundbreaking inventions in the field of laser physics for the method of generating high-intensity ultra-short optical pulses.

She and her research partner Gérard Mourou are being honoured with their discovery of Chirped Pulse Amplification (CPA).

This innovation allows high-precision laser procedures such as laser eye surgeries, certain cancer treatments and telecommunications with fiber optics, to be conducted. CPA was originally the topic of Dr. Strickland's Ph.D. research in 1985, but it later became the most powerful laser the world has ever seen.

Dr. Strickland is the third woman to ever win a Nobel Prize in physics, after Marie Curie in 1903 and Maria Geoppart-Mayer in 1963. Dr. Strickland is also the first Canadian woman to win a Nobel Prize in science.

The news came as a surprise to Dr. Strickland as an early morning wakeup call, "I'm there hugging my husband saying 'This is the Nobel Prize, how can this be! What else can you say?'" Dr. Strickland said. "I

remember just thinking this would be the cruelest prank, but it can't be that, and then you get the email from the Swedish Academy. There's no other reason for the Swedish Academy to contact me at five in the morn-

Her pursuit for the Nobel Prize began in the 1980's, as a graduate student. Dr.Strickland worked closely with her Ph.D. supervisor, Professor Gerard Mourou. Together they discovered a way to amplify short laser pulses by stretching them out to about 10000x in length, causing its peak power to decrease.

Just as any other great achievement it did not go smoothly on the first try. "I took many wrong turns," Dr. Strickland said. "In the mid 80's people saw the 23rd harmonic, so my thesis was going to be trying to get the ninth harmonic and nobody had seen that yet and somebody over in France just comes out with the 25th harmonic so it blew the purpose for my thesis right out the door. I then ended up doing multi-photon ionizations which is why I cited Maria Geoppart-Mayer."

Dr. Strickland also has some inspiring words for the students of the University of Waterloo: "Everybody should always just march to their own being," she said. "I think that everybody should have a talk with themselves and say what can I do and what do I like to do." She will be accepting her award in Sweden in Dec. 2018.



Donna Strickland, the third woman ever to win the Nobel Prize for physics.

arts & life

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Kitchener-Waterloo's first zero-waste grocery store opening this fall

Micaela Yawney Reporter

Tithin just a few months, Kitchener-Waterloo's first zero-waste grocery store will be open for business. Zero Waste Bulk is a local company founded and owned by Waterloo Alumni, Ellin Park. The grocery store will be located on 110 King St. S and will offer a place for individuals to purchase local and organic groceries while also shopping zero-waste. This means that customers will be able to purchase grocery items that are free

of packaging and plastic.

The idea of opening a zero-waste grocery store began a year and a half ago when Park made the transition to live a minimalist and zero-waste lifestyle. "When I became more mindful of my consumption, I became more mindful of my waste," Park said. "I have always cared about the environment, but I didn't realize there was more I could do."

Park realized how inconvenient it was to shop zero-waste since there was not one place to purchase all the necessities without packaging in one place. Zero Waste Bulk will make this pos-

sible. With the opening of this new grocery store, it will become convenient for individuals to live a life free from excess waste and overconsumption.

The store will utilize a bringyour-own-container (BYOC) system. Individuals will be encouraged to bring their own containers to take home groceries, or for a small fee, purchase paper bags to place their groceries in.

In entering the store, customers containers will be weighed. At checkout, the weight of the container will be deducted, and customers will only be charged for the weight of the product within their

Zero Waste Bulk has most recently been running a campaign to raise money to cover their startup costs. They have currently raised over \$13,000 with a goal of \$15,000. These costs will cover expenses such as the purchasing of inventory and equipment for the grocery store.

The company has also prioritized working with local companies - specifically, local farmers, to supply the items at the grocery store. "The closer the better," she said. Local suppliers have been willing to work with Zero Waste Bulk to ensure that products are

packaged, transported, and sold free from plastic and single-use packaging. For example, container systems are being utilized amongst local coffee bean suppliers in transporting coffee beans to the grocery store.

Zero Waste Bulk's own line of plant-based foods will also be available for purchase at the grocery store. Accessibility has also been prioritized in the design of their grocery store. "Accessibility is something we have thought about from the beginning," Park said. Their goal is to make zero-waste living possible for every-

ARTS 490: THE SOCIAL AND POLITICAL IMPLICATIONS OF ARTIFICIAL INTELLIGENCE

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Harleen Kaur Dhillon & Khang Nguyen Staff Reporters

ee Maracle's grandfather told her that they have to make, 'them' more like us. Maracle related her experiences and thoughts on healing at her lecture as part of the Indigenous Speakers Series on Oct. 3.

The Humanities Theatre was nearly full of students who were interested in the integrated dance and lecture of Lee Maracle and Bill Coleman.

Maracle shared stories of herself, her father, and her grandfather — all who defied the people telling them to stay quiet. From her father performing the Lament of Confederation to her own experiences of speaking when she was told to stay quiet and remembering when she was told to forget, Maracle demonstrated the importance of speaking up.

The Indigenous Speakers Series is an effort to combine Indigenous and Canadian knowledge through Indigenous scholars. "Not about us, without us," she said.

"Get the word out," Lori Campbell, director of the Waterloo Indigenous Student Centre, said. "Put the pressure on all the governing bodies — the faculty, the Feds. the University — to provide these opportunities so we can learn — because we need to work alongside each other, not just [know] about each other."

Being able to speak, write, and share her stories is priority for Maracle. Having worked in the film industry and art collaborations, she is used to expressing her identity and sharing her knowledge through various media.

Not only are speeches her platform, Maracle also incorporates her Sto:Lo Nation heritage and feminist lens onto sociology and historical significances through writing. Her award-winning books deal with societal issues related to aboriginal people, especially women. She marvels that, while she was an angry young woman, her grandchildren are not. They are loving and willing to teach and learn.

"Humanity is returning," Maracle said.

man's movements. Composer Phil Strong helped as live sound assistant. The trio delivered a captivating piece of contemporary

As Maracle recited a spiritual tale, Coleman began moving slowly, using tools such as stones, pebbles, and plastic wrap to add another dimension to the story. His pace quickened, dancing in a frenzy around the

We could have been making this art from the very beginning. Imagine what a country we could have been had we done so.

- LEE MARACLE, INDIGENOUS AUTHOR & TEACHER

A circle of drummers from the Indigenous Students Centre (ISC) initiated the event with their music. Their voices were accompanied by their drums, and sometimes members of the audience, in a hypnotizing

Maracle and Coleman followed this song with their poetry and dance presentation. They told a story of fear, anger, hurt, and healing through Maracle's words and Colestage as the story reached its climax when the word "dance" was repeated, finally returning to kneel at Maracle's feet.

Maracle's poetry transitioned to speech, beginning with the recognition that healing presupposes truth. "When they formed the Truth and Reconciliation Commission (TRC)," she said, "I said this - 'this is not going to be a Truth and Reconciliation Commission. It's voyeurism."



Storytelling dance performed by Bill Coleman with Lee Maracle narrating.

Maracle explained how the the perpetrators of crimes in South Africa had to present their crimes to avoid prosecution after Apartheid ended. In Canada, the survivors share their stories but the perpetrators are not held accountable.

In the last few centuries, Indigenous people have faced many problems. For many, even talking about their thoughts and experiences was largely discouraged.
"Canadians like denial," Maracle said.

"We [are living] in a world where the oppressor's history [has become] the only history." Known for her outspokenness and activism, she talked against the state of mistreatment towards Indigneous peoples. "[Around 60 years ago], Indigenous children were being starved for experiments, but did you know that?" she asked.

Over 1000 school-age native children had been used as experimental subjects by Canadian nutrition experts during 1940s. The abuse has just come to light in recent years.

"It was important for this piece to happen. It provided opportunities for people who were residential school survivors to share their stories and to be heard," Campbell said. "[But] the perpetrators of the crimes were not held accountable."

Campbell emphasizes the importance of stories and the lessons that have been learned from them. The TRC only focuses in residential school survivors and many stories — of those who did not survive, of land, of history — are left untold.

"Everyone is an anarchist, you're just bad at it. Now, we need you to be good at it," Ma-

"Art is a way of life that is new," said Maracle. "We could have been making this art from the very beginning. Imagine what a country we could have been had we done so."

science & tech



HAPPY THANKSGIVING!

Happy Thanksgiving from Imprint Science. Email editor@uwimprint.ca and come write for us after reading week!

Is there enough land to feed the world?



Charlotte Hings Managing Editor

new study at the University of Guelph and the University of Waterloo have found that the United States Department of Agriculture (USDA) recommended diet is too land-intensive for the planet. If everyone on the planet followed this recommended diet, then an additional gigahectare of land (the size of Canada) devoted agriculture would be needed to produce this food, exceeding the amount of fertile land actually available. This means that these dietary guidelines are fundamentally flawed and that not only nutrition, but also the long-term stability of the food system and of the environment need to be considered when creating them.

This study focuses specifically on the supply of food needed to feed the world based on USDA dietary recommendations, and the land required to achieve this supply, regardless of the accessibility of the food to the world population and how much of this food is lost or wasted from farm to table. Results show that in North America, land could be spared by switching to the USDA recommended diet, because the current consumption of land-intensive foods by people in this area, such as meat products, is higher than the USDA guidelines recom-

Conversely, Africa, Eastern Europe, the

European Union and Oceania would cause a large land deficit by following the USDA recommended diet.

Focusing in on the European Union, where instances of malnourishment are currently infrequent, causing a land deficit, suggests that the USDA guidelines are unsustainable when it comes to land-intensive

The information in this study is novel in terms of the physical quantification of the land required to feed the world according to USDA guidelines, however, the results and implications line up with what the sustainable diets discourses have been saying for many years.

As early as 1971, Frances Moore Lappé's pioneering book, Diet for a Small Planet, pointed out the consequences of unfair and ineffective food policies that favor meat production over plant-based diets. Lappé advocated for change toward overall consumption of food that is lower down the food chain and placed urgency on the need of corporate and social responsibility to achieve this.

To feed a person on a plant-based vegan diet for one year, requires one-sixth of an acre of land. To feed a person on a vegetarian diet including egg and dairy products, requires three times that amount of land. The average American's diet, that is high in meat, egg and dairy consumption, requires 18 times as much land. This accounts for the land required to grow the food needed to

feed the livestock as well as the land needed to keep livestock. There are currently 9 billion livestock maintained on US soil to meet the demand of animal protein consumed by Americans.

These livestock consume 7 times more grain than is consumed directly by the entire American population. This amount of grain would be sufficient to meet the needs of 840 million people on a plant-based diet.

Additionally, producing I kg of animal protein requires 100 times more water than producing I kg of grain protein. This incorporates the water needed to grow the amount of feed needed to maintain the livestock over the course of their lives as well as to support the livestock themselves. For example, to produce I kg of beef requires about 13 kg of grain and 30 kg of hay. Approximately 17 000 L of water is needed to grow that grain and about 30 000 L for the

Given the land and resource intensity of meat production, devoting more land to meat production to meet the USDA guidelines worldwide is neither a feasible nor sustainable way to feed to world. For food production to be sustainable, it must not compromise the ability of future generations to meet their own needs.

Current food production is condoning the overuse of chemical fertilizers, land and water, degrading the soil, accelerating biodiversity loss, altering biochemical cycles, disturbing the carbon cycle and supports

unfair trading practices. These exploitative and destructive patterns are severely compromising the health and even the existence of future generations as well as future planetary health.

Given this, it is no surprise that the policies surrounding food production and standardized dietary guidelines are in serious need of an overhaul, but this is not the first time researchers are saying this. In 1986 Joan Gussow and Kate Clancy coined the term "sustainable diet," arguing that food choices cannot be solely based on nutrition, but must also incorporate environmental, cultural and economic and ethical criteria. A sustainable diet therefore works toward protecting and respecting biodiversity and natural ecosystems, is culturally acceptable, accessible, economically just and affordable, nutritionally sufficient, safe, and

Sustainable diets are therefore needed because as humans, our well-being is founded on the well-being of the environment in which we live. Anything threatening its well-being, integrity and stability is inherently threatening our own. This new research supports the urgency of policies that promote sustainable diets by putting a quantitative lens on this ethical foundation of sustainability and implies that dietary guidelines must consider sustainable global land use, equity, and natural ecosystem conservation in addition to human health requirements.

sports & health



WRITE FOR SPORTS

Want to go UW games for Imprint? You'll be able to talk to players, coaches and fans! For more info email sports@uwimprint.ca.

Warrior Chris Moore takes gold

Varun Venkataramanan Sports Reporter

n Sept. 29, 2018 the University of Waterloo hosted its 22nd annual Don Mills Open, a cross country meet open to individuals and teams of all ages. Also known as the Waterloo Open, the event features a 6 km open women's race and an 8 km open men's race. Waterloo's own Chris Moore won the men's race while Wilfrid Laurier University's Lizzy Laurie captured the women's title.

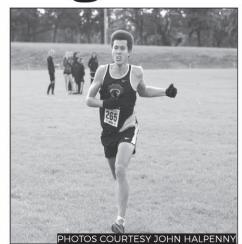
The races took place at Waterloo's North Campus next to Columbia Lake. The brisk and sunny weather was perfect for running. The meet saw runners from colleges and universities all across Ontario, as well as a few individuals and track club teams.

The women's race kicked off first at 10:00 am with 45 runners. Waterloo's best finisher was Stephanie Ryall, who came 6th overall with a time of 23:05.71. When asked about her race, Ryall said that she was "happy with her last lap," but felt she, "started the race a little too fast."

With 70 runners, the men's race began at 11:00 a.m. just as the weather began to warm up. It was a competitive race, but Moore led throughout as he finished with a time of 25:59.58. Other notable Waterloo runners include Akiva Goldberg and Alex Hoerner who finished 5th and 6th overall, respectively. Moore was ecstatic following his victory, saying he, "finished a job he began four

When asked about the women's race, Waterloo cross country coach, Bryan Stride stated that he was happy with the team's performance. Stride was also impressed with the men's team, saying, "two of our team's best runners weren't there today, but we still finished with three runners in the top 10."

The next race for the Waterloo cross country team is on Friday, Oct. 12, at the Mc-Master Open in Hamilton.



Warriors battle to draw after red

Varun Venkataramanan Sports Reporter

n Sept. 29, 2018, the University of Waterloo men's soccer team faced off against the University of Windsor Lancers at Warrior Field. The game got scrappy towards the end but neither team was able to find the back of the net as they drew o-o. Ranked third in the OUA West Conference with 18 points and a 6-4-0 record, the Warriors looked to increase their chances of playoff qualification while the Lancers aimed to improve their 5-4-2 record and put themselves in playoff position.

Kicking off at 3:15 pm, the first-half was a back-and-forth affair as both teams struggled to create quality scoring chances. Waterloo found some success working down

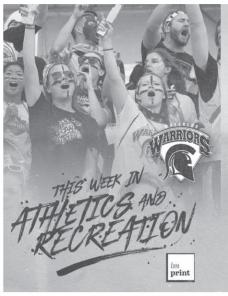
the right flank through right back Luka Frankovich and winger David Chung, but none of their attempts resulted in a goal. Both teams went into the next half having to rethink their strategy.

The game began to opened up in the second half as Warriors coach, Mark Worton swapped Chung to the left wing where he was much more successful against smaller defenders. His strong positional play and quality touches resulted in a few openings for the Warriors but players were unable to follow up. As the Warriors began to push farther up the pitch in search of a goal, the Lancers started to launch successful counter-attacks, playing up the flanks and crossing the ball inside the penalty area to generate scoring opportunities. However, Waterloo keeper Matt Papadopolulos stood tall on his line and kept Windsor off the

In the 76th minute, Waterloo centre back Florian Bruckeder received a straight red card for a strong sliding challenge. The Warriors tightened up their defence and pressured the Lancers for the final 14 minutes, making it difficult for the Lancers to generate chances with the man advantage. However, in the final minute of stoppage time, a miscommunication between Papadopolulos and the Warriors' back line left the ball available in the penalty box, luckily the Lancers were unable to capitalize on the opportunity.

When asked about the game, Chung said he was "disappointed with the result" but noted that the team "defended well down a man" following the red card. Overall, he was proud of team's defensive effort to gain a point in the standings.





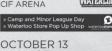


VS DALHOUSIE OCTOBER 12 VS MOUNT ROYAL

UWATERLOO STUDENTS: OW YOUR WATCARD

MEN'S HOCKEY OCTOBER 12

VS LAURIER 7:00 PM CIF ARENA



VS U of T 7:00 PM CIF ARENA

FOOTBALL VS MCMASTER 1:00 PM WARRIOR FIELD

WARRIOR REC

Being active is a proactive way to take care of your mental health! Get active with one of our many Open opportunities:

- Badminton » Basketball
- » Rec on Warrior Field » Volleyball





imprint

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Next scheduled post-mortem meeting:

Next scheduled board of directors meeting: Thursday, Oct. 18 at 5:30 p.m.

opinion



HAVE YOUR SAY

Submit your letter to the editor or your community editorial to opinion@uwimprint.ca. Find more opinions at uwimprint.ca.

The inconvenient truth about minimum wage

any of the people fighting for minimum wage increases, especially students and other youth, should actually be the ones opposing this legislation. While the economic and moral theories about minimum wage are hotly debated, and the literature on associated overall economic effects is often mixed or inconclusive, there seems to be one common theme for the youngest people in the work force: when minimum wage goes up, employment for teens and workers under 24 goes down.

A recent study reviwed nearly 200 minimum wage amendments over the last 30 years in Canada and found that a ten per cent increase in minimum wage is associated with up to a four per cent reduction in youth employment. A study which looked at minimum wage hikes during a 30 year period in California found the decline to be nearly five per cent. A 2016 study published in the World of Labor (WOL) provided a comprehensive and convincing review with similar findings.

A very basic understanding of the standard economic model is all that's needed to make sense of these results. If an employer is forced to pay higher minimum wages, then some lowwage workers will get laid off at the expense of others making a little more.

The age disparity among minimum wage workers is well evidenced. Sixteen to 24 year olds comprise less than 14 per cent of the workforce but make up over 50 per cent of minimum wage earners. Matthew Rousu, Ph.D. associate professor of economics at Susquehanna University in Pennsylvania recently wrote that federal minimum wage "has a devastating impact on teenagers" since companies cannot and will not pay young workers with no skills or experience minimum wage, let alone a higher wage. The reason this

is so problematic is that today's youth and workers under 24 are the future of our country and, statistically, those who are unemployed at an early age are more likely to earn less or be unemployed in the future.

Like many of you, I chose the University of Waterloo for its co-op program. It allows us to get our foot in the door, gain valuable skills, and accelerate the discovery of our passions. Fortunately, we're able to accept positions for less than minimum wage because they're considered internships. But shouldn't everyone have the opportunity to gain experience and get started climbing the ladder regardless of what their labor is worth? Certainly, those without access to education shouldn't be repressed of this opportunity. We don't tell baseball players they can't play ball until they're good enough to make a minor league team. They're encouraged to start at little league, class A, or double A, wherever their skills are suitable and allowed to learn, compete, and have the ability to climb the ranks. Removing the lower rungs of the ladder thwarts opportunity and only

hurts those at the bottom.

I happen to believe the federal government should not determine wages, but that the free market should. And this isn't just me proclaiming capitalist principles; a Small Business Network survey found that 82 per cent of small businesses agree with this very statement. Why would they support an arbitrary, one-size-fits-all minimum wage which - according to Dr. Mark Perry, Ph.D. of the American Enterprise Institute is "almost never based on any sound economic/cost-benefit analysis"? The market is simply too heterogenous and dynamic with "supply and demand conditions that are specific to local market conditions [which] vary widely by geographic region and by industry."

Many have made the moral argument that firms should not be allowed to exploit workers and pay them unethically low

To this I say a couple of things: First, what constitutes an act as unethical? Shouldn't every worker, or private unions of workers, which can have considerable power, be able to decide for themselves what's

ethical and accept or deny offers without the government infringing? There is, of course, the exception being child labor since children cannot legally consent. In fact, there's an argument for a breach of civil rights when you disallow someone to accept an employment offer that they deem acceptable. How can we possibly determine a universal ethical threshold? Where did we get \$14 from? Why not \$20? And \$13.50 is suddenly unethical?

And second, the exploitation argument is a valid one but it's only valid for monopsony markets in which competition does not exist. It's well documented that wages will be lower in these markets than in their competitive counterparts and that minimum wage hikes can actually have positive effects in complete monopolies. However, while no market today is 100 per cent free, our economies in Canada and the U.S. are predominantly free markets, this is why we've observed that minimum wage hikes do not work from a macroeconomic lens. It makes sense that a free market is the best way to maintain the competition that prevents workers from being exploited.

Let me be clear: while I disagree with the market interference that minimum wage proponents are suggesting, I absolutely resonate with and support the goals of reducing poverty in our communities and across our country. However, I'm convinced the real income inequality culprits lie within a lack of access to education, drug and substance abuse, cultural disparity, absent parents in the home or, in many cases, a combination of these and more. But preventing a young, consenting worker from gaining experience is certainly not the solution. Let's be careful what we wish for.

Connor Huxman 3B Biomedical Engineering



campus bulletin

WHAT'S HAPPENING AROUND TOWN

Submit your 30-word announcement or upcoming event to ads@uwimprint.ca for free.

upcoming events

October 2018

For all of UpTown Waterloo Fall activities visit www.uptownwaterloobia.com. **Savour in Stratford** - Saturday morning Market from 7 a.m. to 12 p.m. at the Rotary Complex; and more! www. visitstratford.com.

Wednesday, October 10

KW Chamber Music Society presents October at the Music Room: Beethoven's Sonatas, Marc Toth, piano, at 8 p.m., at 57 Young Street, W., Waterloo. For more info visit UW Box Office or www.Ticket-Scene.ca/kwcms or 519-569-1809.

Saturday, October 13

Kitchener Zombie Walk X 2018 from at 12 to 5 p.m. at The Accelerator Centre, 44 Gaukel Street, Kitchener. Dress up like a zombie and go for a walk for only the cost of a non-perishable food item. Website: www.kitchenerzombiewalk.com/facebook. Contact information: info@kitchenerzombiewalk.com.

Sunday, October 14

KW Chamber Music Society presents October at the Music Room: Beethoven's Sonatas, Marc Toth, piano, at 8 p.m., at 57 Young Street, W., Waterloo. For more info visit UW Box Office or www.Ticket-Scene.ca/kwcms or 519-569-1809.

Tuesday, October 16

KW Chamber Music Society presents

October at the Music Room: "The Tsar of teh Guitar" with Artyom Dervoed, guitar, at 8 p.m., at 57 Young Street, W., Waterloo. For more info visit UW Box Office or www.TicketScene.ca/kwcms or 519-569-1809.

Wednesday, October 17

Music Noon Hour Concerts, www. uwaterloo.ca/music, presents "The Water is Wide" with soprano Ellen McAteer and pianist Geoffrey Conquer at 12:30 p.m., Conrad Grebel Chapel.

Wednesday, October 24

Music Noon Hour Concerts, www. uwaterloo.ca/music, presents "Like Minds" jazz at 12:30 p.m., Conrad Grebel Chapel.

Saturday, November 3

Emiko's Mini Convention 2018 at 10 a.m. to Sunday, November 4 at 5 p.m. at The Accelerator Centre, 44 Gaukel Street, Kitchener, Ontario. Waterloo Region's longest running fan-run Anime, Gaming and Comic Convention are getting ready for our annual event this November. Weekend passes are available online. www.go2emc.ca/facebook. Contact information: info@go2emc.ca.

Wednesday, November 21 Walter Bean Public Lecture (free)

- "On the State of Freshwater Fish and Fisheries: Finding a Future for the Forgotten," from 7 to 8:30 p.m., Humanities Theatre, Hagey Hall, with speaker Dr. Steven Cooke. Register at www.waterloo.imodules.com/tdwal-terbean.

announcements

TUESDAYS

GROOVE exercise class at E7, 2nd floor pitch space from 5 to 6 p.m. For more info cindy@uwaterloo.ca.

Gamelan - join the World Music Ensemble or Community Gamelan. For more info, www.uwaterloo.ca/music/ensembles

Chapel Choir - connect with friends, unplug from screens, sing your faith. Chapel Choir meets Mondays and Wednesdays at 4 p.m. Available for credit or an extracurricular. Contact Professor Kate Steiner at ksteiner@uwaterloo.ca or www.uwaterloo.ca/music for more details. Audition interviews begin September 10.

volunteering

Bereaved Families of Ontario -

Midwestern Region, The Family Centre, 65 Hanson Ave., Suite 1042, Kitchener. We currently have a number of exciting volunteer opportunities. For more info, jaime@bfomidwest.org or 519-603-0196.

Become a Meals On Wheels volunteer! Call 519-772-8787 or www. communitysupportconnections. org/volunteer/apply.

help needed

NOT JUST TOURISTS — We are a humanitarian organization that pack medical supplies and bring them to developing countries. We are in need of volunteers, donors and travelers. For more information, please visit www.notjusttourists.

workshops

UW Career Action Workshops: strobe.uwaterloo.ca.

Thursday, October 11

Exploring Your Personality Type (Myers-Briggs Type Indicator), Part II - TC 1214 from I:30 to 3:30 p.m. Note: There is a student materials charge of \$10 payable at the Centre for Career Action prior to the session. Once you have registered and paid, you will be given information on how to complete the MBTI assessment online. The assessment must be completed at least 2 business days prior to the workshop.



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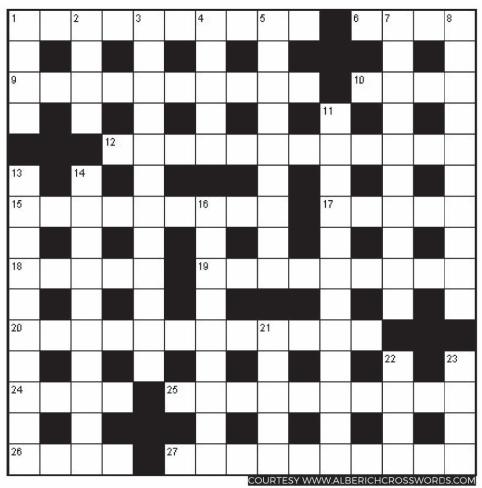


distractions



Q: What do chemist dogs do with their bones?

A: They Barium!



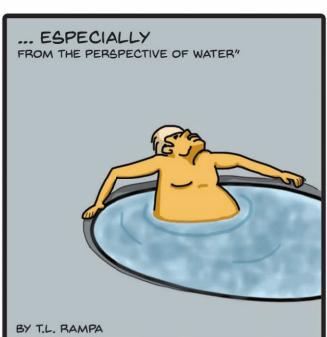
Across

- I Came across a record concerning journalist (10)
- 6 Language of old city belonging to the French (4)
- 9 They'll get wrongly blamed for heading off escape by animals (10)
- 10 There's potato in Mum's pudding (4)
- 12 Style of cooking providing contrasts (5-3-4)
- 15 Country-loving Irishman in charge of containing disturbance (9)
- 17 Giving note to terrorists makes one angry (5)
- 18 One who latches on to another is a sucker (5)
- 19 Sailor's intent perhaps is to be self-restrained (9)
- 20 A comment sure upset in due proportion (12)
- 24 Man told to get on his knees? (4)
- 25 Boundary rope may produce such a decision (10)
- 26 E.g. dogs returning from walk (4)
- 27 Not quite one's best friend on the ship (6,4)

Down

- I Pretty girl gets some food (4)
- 2 Animal found in sea location (4)
- 3 Fat little Edward is biased (12)
- 4 The First Lady touring Oklahoma will awaken memories (5)
- 5 The thresholds of delights (9)
- 7 Heartless robbers go off with a pet. The villains! (10)
- 8 Below, below (10)
- II Managed to get clergyman in dead awkward situation (12)
- 13 They are seeking work after demolition of aspic plant (10)
- 14 Steam railway takes on head of Railtrack to improve efficiency (10)
- 16 To perform in a different key, one's parts must be arranged (9)
- 21 Went on horseback round cowboy show (5)
- 22 Junk mail from the capital (4) 23 Nothing but a lake (4)





Solution to last week's crossword:

M	В	Α		S	Н	0	W		M	R	S	T
Α	L	L		С	Α	P	0		0	0	P	S
R	E	Α	S	0	N	E	R		Α	S	I	Α
С	Α	M	P	U	S	С	E	N	T	E	R	
S	Т	0	Α	Т			T	0	E	С	Α	P
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Α	L	E		D	Р	Н	I	L		T	S	P
P	Α	N	G	0	L	I	Ν					
E	R	R	Α	Т	Α			S	N	Α	С	K
	С	0	N	S	Т	R	U	С	Т	I	0	N
F	Е	U	D		Т	Α	K	Е	Н	0	M	Е
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D	Y	Е	R		R	E	S	Т		1	Т	D